

**SECOND SEMI-ANNUAL 2002 REMEDIAL ACTION
NATIONAL ELECTRIC COIL SUPERFUND SITE
HARLAN COUNTY, KENTUCKY**

**Prepared for:
COOPER INDUSTRIES
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1.0 INTRODUCTION

1.1 SITE LOCATION

The National Electric Coil (NEC) facility is situated on approximately four acres of land and is located in Dayhoit, Harlan County, Kentucky, shown on Figure 1. The facility is bordered on the west by former U.S 119, on the east by the Cumberland River, on the north by an emergency utility substation, and on the south by a trailer park property. The facility is surrounded by a chain-link fence, and is occupied by a main plant building, several smaller storage buildings, and a boiler house, shown on Figure 2. Figure 3 shows the site vicinity, including the offsite properties and the location of the Cumberland River that flows generally east to west.

1.2 SITE HISTORY

The facility was originally opened in 1951 by the McGraw-Edison Company (McGraw-Edison) and operated as a rebuilding and remanufacturing facility for coal mining and related industrial equipment including electric motors, rewinding electric coils, manufacturing, general machine shop work, and mining equipment repair. McGraw-Edison owned and operated the facility until 1985 when Cooper Industries (Cooper) purchased McGraw-Edison as a wholly-owned subsidiary. McGraw-Edison continued to operate the NEC facility until August 1987. The Treen Land Company of Brookside, Kentucky purchased the NEC building and property in August of 1987 and the operations were reopened as the National Electric Service Company. The facility operates under the National Electric Services Management Group, owned by Charles Dozier, for electrical motor repair work and limited rebuilding of hydraulic systems for the coal industry.

1.3 SITE ENVIRONMENTAL ACTIONS

In October 1990, the United States Environmental Protection Agency (USEPA) issued a Unilateral Administrative Order (UAO) (USEPA Docket No. 90-57-C) requiring immediate actions designed to mitigate the release of hazardous substances from the site. Cooper subsequently contracted with Law Engineering & Environmental Services (Law) to develop and implement a Remedial Action Plan (RAP) in accordance with the USEPA's UAO. As part of the RAP, Law installed monitoring wells at the site to evaluate the magnitude and extent of the groundwater contamination.

The NEC site was proposed for inclusion on the National Priority List (NPL) on July 29, 1991 and the site was placed on the NPL on October 14, 1992. USEPA and Cooper entered into an Administrative Order by Consent for a Remedial Investigation/Feasibility Study (RI/FS) in May 1992. The USEPA issued a UAO on December 15, 1992, directing Cooper to perform the Interim Remedial Design/Interim Remedial Action (RA), described in the Record of Decision (ROD), concurrently with the RI/FS to capture groundwater containing chlorinated volatile organic compounds (VOCs).

The original remedial action involving the groundwater recovery and treatment system was initiated in July 1993 and consisted of an onsite Recovery Well CMW-5-11 located in the deeper bedrock aquifer zone (at an approximate depth of 120 feet), an equalization tank, an air stripping tower, and a 10,000 pound activated carbon unit to treat the air stripper off-gas.

An additional RA was implemented at the site to address impacted groundwater in accordance with the April 26, 1996 ROD and the May 20, 1996 UAO issued to Cooper by the USEPA. A RA Report (March 4, 1998) was submitted to document

the implementation and initial start-up activities associated with the RA system. The supplemental RA system consisted of the installation of additional groundwater recovery systems located in the shallow alluvial aquifer and the intermediate and deeper zones of the underlying bedrock aquifer, and the continued use of the treatment system to remove the VOCs from the extracted groundwater using air stripping technology. The air stripper off-gases are treated through a catalytic oxidation system (instead of the activated carbon unit) prior to being discharged into the atmosphere via a 60-foot tall air stack.

The final groundwater recovery system consisted of four recovery units: an interceptor trench located in the shallow alluvial aquifer (approximately 190 feet long and 24 feet deep); Recovery Well R-2 located in the intermediate bedrock aquifer zone (approximately 80 feet deep); Recovery Well CMW-5-2A located in the deeper bedrock aquifer zone (approximately 125 feet deep); and existing Recovery Well CMW-5-11 (approximately 120 feet deep) located in the deeper bedrock aquifer zone.

The final groundwater treatment system consisted of a 2,000-gallon double-walled equalization tank, the existing air stripper tower, and a catalytic oxidation system to treat the off-gases from the air stripping tower, in accordance with the EPA approved air emission performance standards. Treated water from the air stripper continues to be discharged to the Cumberland River in compliance with the requirements of a KPDES permit. The layout of the remediation system is shown on Figure 2.

The supplemental RA implementation activities were conducted between September 1997 and February 1998. The final groundwater recovery systems and the catalytic oxidation unit started up in February 1998.

1.4 CONTAMINANTS OF CONCERN

Historically, several VOCs have been detected in the groundwater samples collected from the site, however the contaminants with the highest concentrations detected include trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), vinyl chloride, and 1,1-DCE. The contaminants of concern and their respective maximum contaminant levels (MCLs) are listed below:

Contaminant	MCL (ug/l)
TCE	5
Cis-1,2-DCE	70
Trans-1,2-DCE	100
Vinyl Chloride	2
1,1-DCE	7

2.0 SEMI-ANNUAL ACTIVITIES

2.1 SYSTEM OPERATION AND MAINTENANCE

Civil & Environmental Consultants, Inc. (CEC) and Eastern Well and Pump conducted routine monthly monitoring of the groundwater remediation system. The operations and maintenance of the groundwater remediation system are performed by Eastern Well & Pump. Table 1 summarizes the maintenance conducted from July through December 2002. The system shut down once in August due to an electrical outage, but was returned to operation the same day. On December 20, 2002, the system was shut down for routine maintenance. During the shutdown, the media was removed from the air stripper tower and cleaned. The pumps, piping, and flow meters were checked and maintained, and Wells R-2, MW-11, and MW-5-2A were cleaned and sanitized. Minor problems with the pump in MW-5-2A and flow meters were corrected during this period. Overall, the system has operated satisfactorily through the reporting period.

2.2 INFLUENT AND EFFLUENT WATER SAMPLING

Operation of the remediation system is subject to federal and state requirements. The KYDEP Water Resources Branch, Division of Water, in a letter dated March 6, 1996, set forth the requirements for the NEC site for groundwater withdrawal and pumping from the three aquifer zones. The authorization letter permits total recovery rates to a maximum of 250 gpm (0.360 mgd) from all of the aquifer zones. The groundwater recovery system was pumped at a rate between 128 to 152 gpm, with an average flow rate of 141 gpm for the reporting period.

Monitoring of the treated groundwater discharge has continued during the operation of the Remedial Action (RA) to demonstrate continued compliance with

the KPDES requirements. A new KPDES permit (No. KY0093149) was approved by the KYDEP for the discharge of water from the treatment system effective from April 1, 2002 through July 31, 2003. The permit duration period is abbreviated to allow KYDEP to synchronize this facility with other permit grantees in the Cumberland River watershed. The permitted groundwater withdrawal rate of 250 gpm is unchanged; however, the daily maximum system discharge limits have been removed. Metals limits for the effluent have been removed and quarterly monitoring and reporting is required for total recoverable zinc and copper. All volatile organic compound (VOC) effluent limitations remain unchanged. A table of effluent limitations is presented in Table 2 and was in effect throughout this reporting period. A new KPDES permit application was submitted to the KYDEP in January 2003.

Effluent water samples were collected monthly during the reporting period to monitor the treatment efficiency of the air stripper. In addition, influent samples were collected during this period to monitor the effectiveness of the remediation system and to estimate the amount of contaminants removed. Samples were analyzed for VOCs by PACE using USEPA Method 8260.

2.3 INFLUENT AND EFFLUENT AIR EMISSION SAMPLING

The KYDEP has not established limits for air emissions from the treatment system and does not require an air permit. However, the USEPA has developed emission rates and ambient air performance standards for the RA system as follows:

Cis-1,2-DCE	5,850,000 ppbv
TCE	19,600 ppbv
Vinyl Chloride	837 ppbv

Performance standards were established in the ROD, with limitations on the discharge of TCE, cis-1,2-DCE, and vinyl chloride. The point of compliance for the emission rate standards is the discharge end of the 60-foot tall air exhaust stack, after the catalytic oxidation unit.

The air emissions exiting the air exhaust stack were monitored continuously during the initial start up of the RA off-gas system to demonstrate compliance of the catalytic oxidation (cat-ox) treatment system with the USEPA emission rate performance standards. Monitoring of the air exhaust emissions exiting the stack has continued on a monthly basis during the operation of the RA to demonstrate continued compliance with USEPA's air emission performance standards. The off-gas catalytic oxidation system started operation in 1998 when the additional RA work was implemented.

Influent air samples are collected each quarter and were collected in September and December, 2002. Air samples were collected using Summa canisters with flow-control valves and analyzed by Severn Trent in Houston, Texas, for VOCs using USEPA Method TO-14.

2.4 GROUNDWATER SAMPLING

Cooper conducts routine groundwater monitoring on a semi-annual basis. The purpose is to evaluate the concentrations of VOCs in groundwater with respect to time, and to measure the effectiveness of the groundwater recovery and treatment system. The groundwater monitoring system for the NEC site is summarized in Table 3.

The second semi-annual 2002 sampling event was conducted on September 25 and 26, 2002 by CEC. Activities included water level measurement in 23 monitoring

wells, as well as an onsite interceptor trench sump, and the collection of 12 groundwater samples. Groundwater monitoring well locations are shown on Figure 4. During the monitoring event, the pump at CMW-85 was inoperable and a sample could not be obtained. Furthermore, a new owner had moved into the property. Representatives from Eastern Well & Pump will be fixing the pump so that it can be sampled in 2003.

Conventional groundwater sampling procedures and protocols were used in conducting the monitoring. Groundwater levels were measured within each monitoring well to determine the groundwater elevations for the development of groundwater elevation contour maps, and to identify groundwater flow directions.

Prior to sampling each monitoring well, a minimum of three well volumes of water were removed from the wells (unless the wells are recovery wells used for pumping groundwater), and disposed through the facility treatment system. Samples for laboratory analysis were collected in laboratory-prepared VOA vials containing an appropriate amount of preservative. Vials were filled without headspace or air bubbles. Samples were packaged in shuttles containing ice packs for shipment to the analytical laboratory. Chain-of-custody protocol was adhered to during all phases of sample collection, transportation and delivery to the laboratory. Pace Analytical of Export, Pennsylvania, provided the sample bottles with preservatives and analyzed the groundwater samples.

During the sampling event, four QA samples were collected. QA samples included an equipment blank and a duplicate sample from CMW-7 (labeled as "Duplicate") and a field blank. A trip blank was prepared by the analytical laboratory prior to shipping the sample bottles; however, the bottles were damaged during the sampling event and therefore no trip blank was analyzed for this sampling event. The equipment blank was collected by pouring deionized water over sampling

equipment after it had been decontaminated, and was collected to evaluate the effectiveness of the decontamination procedures. The duplicate sample was collected to evaluate laboratory analytical procedures. The field blank was collected to evaluate the ambient air conditions at the time of sampling.

3.0 FINDINGS

3.1 SYSTEM PERFORMANCE

The recovery system treated and discharged over 37 million gallons of water during this reporting period (Table 4 and Appendix A). The average flow rates for the recovery system during the reporting period were approximately:

Shallow aquifer (interceptor trench)	1.2 gpm
Intermediate bedrock aquifer (R-2)	17.9 gpm
Deep bedrock aquifer (CMW-5-2A, CMW-5-11)	<u>121.6</u> gpm
Total average flow rate	140.7 gpm

These flows were determined by totalizing flow meters at the treatment plant. Based on these measurements, the average total pumping rate of the system was approximately 141 gpm, which is below the KPDES permit limit of 250 gpm.

Table 1 summarizes the system maintenance activities during this six-month period.

3.1.1 Influent Concentrations

Table 4 summarizes the analyses of untreated influent water for the first half of 2002. Influent samples were collected in August, September, and December 2002. Concentrations presented for July, October, and November 2002 were estimates for calculation purposes based on actual data from the nearest previous month. The analytical results are presented in Appendix B. The cis-1,2-DCE ranged from 430 ppb in the August sample to 310 ppb in December. TCE values fluctuated from 22

ug/l in August to 60 ug/l in December. Vinyl chloride concentrations fluctuated from 29 ug/l in August to 39 ug/l in December (Figure 9).

Contaminant concentration levels in the air stripper influent water through time are summarized on Figure 5. From July 1993 until the final RA system was started in February 1998, the influent concentration showed a decreasing trend through time. The influent concentrations rose significantly once the new RA system was activated in February 1998. However, since that time, the concentrations are again showing a decreasing trend through time.

3.1.2 Effluent Quality

System effluent water concentrations for the reporting period are also summarized in Table 4. All measurements of cis-1,2-DCE, TCE, and vinyl chloride complied with the KPDES permit effluent limits for the daily maximum. Furthermore, monthly average concentrations complied with the monthly average limit specified in the permit. The average removal efficiency for the air stripper was 91.1% (Table 4) from July through December 2002.

3.1.3 Contaminant Removal

Table 4 indicates that approximately 120 pounds of VOCs were removed from the groundwater system during the second half of 2002. This total includes approximately 100 pounds of cis-1,2-DCE, 10 pounds of TCE, and 10 pounds of vinyl chloride. Since January 1997, approximately 2,265 pounds of VOCs have been removed (Appendix A) from the groundwater. Since the start-up of the system in July 1993, approximately 3,915 pounds of VOCs have been removed from the aquifer.

3.1.4 Off-Gas Treatment

Table 5 summarizes analyses of the air stripper exhaust gas (cat-ox influent) and the cat-ox air stack effluent for the reporting period. The analytical report is presented in Appendix B. Concentrations in both the influent and stack effluent samples were well below the standards established by EPA in the ROD. The updated summary of historic cat-ox influent concentrations is presented in Table C-1 (Appendix C). Revised graphs presenting the cat-ox influent concentrations for cis-1,2-DCE (Figure D-1), TCE (Figure D-2) and VC (Figure D-3) are presented in Appendix D. As shown on the tables and graphs, the influent concentrations of these VOCs have consistently been significantly below the effluent standards established by EPA.

For this reporting period, Cooper used the maximum cat-ox system influent concentration for each compound analyzed during the second half of 2002 in determining the percentage of air emission with respect to the standard. For cis-1,2-DCE, TCE, and vinyl chloride, the maximum concentrations were measured in December 2002. The 2,990 ppbv value for cis-1,2-DCE equates to 0.05 percent of the 5,850,000 ppbv standard. The 188 ppbv value for TCE represents 0.96 percent of the 19,600 ppbv standard and the 417 ppbv value for vinyl chloride equates to 49.8 percent of the 837 ppbv standard.

3.1.5 State Regulatory Review

The Commonwealth of Kentucky repealed its toxic substances emission standards on January 19, 1999 and adopted the federal hazardous air pollutant regulations. However, 401 KAR 63:021 Section 1 states, "A source in existence on the effective date of this administrative regulation which was issued a permit pursuant to 401 KAR 50:035 with conditions based on this administrative regulation or 401 KAR

63:022 shall continue to comply with all conditions based on this administrative regulation or 401 KAR 63:022 unless it can demonstrate that a condition is no longer necessary to protect human health and the environment."

Although Cooper was not issued a permit for operating the air stripper as part of the remedial action for this Superfund site, Kentucky's air toxic regulations were considered ARARs. To demonstrate compliance with these former regulations, a table has been prepared utilizing the maximum concentrations of target compounds measured during the year from the air stripper exhaust gas. These concentrations and volumes of chemicals were compared to Kentucky's Threshold Ambient Limits (TALs) and Significant Emission Levels without adjustment for the height of emissions release, which is a stack 60 feet tall. The maximum air stripper emission concentrations were less than Kentucky's TALs by 16 and 78 percent and less than the Significant Emission Levels by 70 and 92 percent for cis-1,2-dichloroethene and trichloroethene, respectively. Even under these extremely conservative computations, the emission levels are substantially below the regulated levels contained in Kentucky's former air toxic regulations and would only emit 584 pounds per year of total VOCs, including vinyl chloride (49 pounds per month, or less than 1.6 pounds per day), Kentucky's total allowable VOC emissions would be 10 tons per year, 20,000 pounds per year, 1,667 pounds per month or approximately 55 pounds per day. This further substantiates the fact that the cat-ox unit is not required to meet the Kentucky air emission standards.

The Kentucky Administrative Code (401 KAR 52:070) establishes criteria for registration of designated air contamination sources. These regulations apply to sources that emit or have the potential to emit (PTE) 2-tons per year or more but less than 10 tons per year of a HAP.

Additionally, the Kentucky Division for Air Quality establishes criteria for designation of insignificant activities as the potential to emit 1,000 pounds of combined HAPs per year, or 5 tons per year of any nonhazardous regulated air pollutant.

Based on the data provided in Appendices (B, C and D) and the analyses of off-gas VOC discharge from the air stripper, the emissions of HAPs and total VOCs are below the criteria for registration as a designated source.

3.2 GROUNDWATER FLOW

Groundwater level measurements were obtained from 23 monitoring wells, plus the onsite interceptor trench sump, during this semi-annual monitoring event (Table 6).

The groundwater elevations were used to generate groundwater contour maps of the shallow, intermediate and deep aquifers. Groundwater flow in the shallow aquifer shows the effects of the recovery trench (Figure 6) with the trench capturing groundwater in the central portion of the facility.

Data for the intermediate aquifer during this reporting period are presented on Figure 7. Dashed contours are included where groundwater elevations are inferred based on historic data from previous pumping tests that have demonstrated that a capture zone has been developed around intermediate pumping well R-2. During the monitoring event, the groundwater elevation in R-2 was found to be elevated above the level recorded on September 9, 2002 presented in the first semi-annual report. The elevated reading was due to iron bacteria build-up in the well that caused the electronic meter to record an erroneous reading. The iron bacteria was removed and the well was cleaned and sanitized in December by Eastern Well & Pump. Based on the flow meter readings, this well pumped continually during the

period. The apparent false elevation reading for this well was not used in the generation of the contour map. The map was developed based on the historic configuration at R-2 and the elevation measured at CMW-12. The groundwater elevation at R-2 will be verified during the first semi-annual 2003 groundwater monitoring event.

Data for the deep aquifer (Figure 8) indicates the presence of an elongated cone of depression surrounding the deep pumping wells, CMW-5-2A and CMW-5-11, and extending toward offsite wells CMW-12A on the DOT property and beyond well CWM-85 located across the river. This flow pattern indicates effective capture of contaminants in the deeper zone.

3.3 ONSITE GROUNDWATER QUALITY

The analytical results for the monitoring and extraction wells, and trench samples are summarized on Table 7 and Figure 9. The complete analytical report is presented in Appendix E. Samples were collected from the interceptor trench sump discharge from the shallow aquifer, recovery well R-2 in the intermediate aquifer, and two recovery wells (CMW-5-11 and CMW-5-2A) in the deeper aquifer. TCE, cis-1,2-DCE, and vinyl chloride were detected at concentrations above their MCLs in deep monitoring well CMW-5-2 and recovery well CMW-5-2A. Cis-1,2-DCE and vinyl chloride were detected at concentrations above their MCLs in recovery well CMW-5-11. The intermediate recovery well R-2 contained TCE, cis-1,2-DCE, and vinyl chloride above their respective MCLs. Benzene was also detected in well R-2 at the detection limit of 5 ppb. The trench contained only TCE above the MCL.

Consistent with previous sampling data, the presence of cis-1,2-DCE and vinyl chloride indicate the presence of natural biodegradation processes occurring in the

aquifers. Furthermore, dechlorination of TCE is very evident with depth in the aquifer, based on Table 7 and Figure 9.

3.4 OFF-SITE GROUNDWATER QUALITY

The second semi-annual groundwater sampling results are summarized in Table 7 and Figure 9. Complete analytical results are presented in Appendix B. Offsite wells sampled during the reporting period were CMW-6, CMW-7, CMW-9, CMW-12, CMW-12-16, and CMW-13. Due to pump problems and new owners, Well CMW-85 was not sampled during this monitoring event. The access issues with the new homeowner and well pump repair will be addressed prior to the next sampling event in 2003.

Concentrations of constituents in excess of the MCLs were detected in only two out of six offsite wells: CMW-7 and CMW-12. Cis-1,2 DCE and vinyl chloride were detected in wells CMW-7 and CMW-12 above their MCLs. The detected values were within historic ranges (Appendix C).

3.5 TIME TRENDS

Water quality data for wells CMW-5-2, CMW-5-11, CMW-7, and CMW-12 were reviewed for trends (Figures 10 through 13). The historic analytical database for the site is presented in Appendix F. The concentration levels are consistent with the historic data over the past few years.

The cumulative VOC mass recovered by the groundwater recovery/treatment system is shown on Figure 15. The continuous increasing trend clearly demonstrates the effectiveness of the system in removing VOCs.

3.6 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Analytical results for quality assurance samples are presented in Table 8. Acetone was detected in equipment and field blank samples but not in any of the groundwater samples. 2-Butanone was detected in the field blank sample. Acetone and 2-Butanone have not historically been associated with the site, and the detections do not appear to be representative of the actual site conditions. The trip blank sample was broken during the sampling event and, therefore, was not analyzed.

The results for CMW-7 and the duplicate sample are within acceptable QA/QC limits.

4.0 SUMMARY

4.1 TREATMENT SYSTEM

The groundwater treatment system continues to be effective at removing VOCs from the groundwater extracted from the shallow, intermediate, and deep aquifer recovery systems. Approximately 37 million gallons of impacted groundwater were removed during this period, at an average combined flow of 141 gpm. A total of approximately 120 pounds of VOCs were removed from the shallow, intermediate and deep aquifer zones during the period. The final RA system was started in July 1993 and updated from September 1997 through in February 1998. Since startup of the system in July 1993, approximately 3,916 pounds of VOCs have been removed from the aquifer.

During the six month reporting period, the air stripper system operated at approximately 91% removal efficiency. The analytical results of effluent water samples collected from air stripper Outfall 001 were well within the KPDES compliance limits.

The off-gases from the air stripper were treated through a catalytic oxidation system. The catalytic oxidation system removed approximately 99.7% of the influent gases of concern (cis-1,2-DCE, TCE, and vinyl chloride) during the six month time period. Influent, as well as effluent, air emission analytical results were significantly less than the required EPA and KYDEP air emission standards for each VOC compound of concern.

4.2 GROUNDWATER FLOW

The groundwater contour maps generated for the shallow, intermediate, and deep aquifers indicate that the recovery system is effectively capturing and remediating the contaminated groundwater. During the sampling event, the groundwater elevation in R-2 was slightly elevated, possibly due to iron filings and bacteria fouling the instrumentation. This well was immediately treated with bleach and maintenance was performed on the pump by Eastern Well & Pump. CEC believes that this well is still adequately capturing contaminated water from the site. In the shallow aquifer, the groundwater appears to be captured by the trench system. Historic data combined with data collected on September 7, 2002 demonstrate capture in the intermediate aquifer. The capture zone developed in the deep zone extends beyond the leading edge of the plume in this zone beyond the Cumberland River toward well 85, nearly 2,000 feet from the site. This finding indicates that the system is not only controlling the plume's movement, but is also retracting and remediating the remaining groundwater contamination.

4.3 ANALYTICAL RESULTS

Samples collected from the groundwater recovery extraction points (Trench, R-2, CMW-5-2A and CMW-11) and in the influent water to the air stripper detected the presence of elevated concentrations of cis-1,2-DCE, TCE, and vinyl chloride which demonstrates effective recovery of the VOC plume. The VOC concentration levels in the recovery and monitoring wells have continued to decrease since the final upgraded system started up in February 1998, based on the time trend analysis figures. However, the cumulative mass of VOCs removed is still increasing (Figure 15). The presence of the degradation products of TCE (cis-1,2-DCE and vinyl chloride) indicates that biodegradation is occurring in the aquifers with depth and is actively supporting natural attenuation of the plume.

The groundwater results from the offsite wells in the deep aquifer indicate that off-site migration of contaminants is being controlled and mitigated by the remediation system. For example, the only off-site wells exhibiting constituent concentrations in excess of the MCLs were wells CMW-7 and CMW-12, which are located close to the site.

4.4 QA/QC

The QA/QC samples collected during this sampling event were generally within acceptable limits. The duplicate sample collected from Well CMW-7 contained contaminant concentrations within $\pm 15.9\%$ of the original sample. The field and equipment blank samples were free of VOCs of concern, except for acetone and 2-Butanone, which are believed to be laboratory artifacts and have not been detected as contaminants of concern at this site.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The groundwater recovery system continues to effectively remove contaminants from the impacted shallow, intermediate, and deep aquifers. The system also appears to be controlling the offsite migration of the contaminants and retracting the contaminant VOC plume. Water-quality data also shows that natural attenuation is occurring in the aquifers.

The continued operation of the groundwater remediation treatment system along with the monthly monitoring and maintenance of the remediation system will continue to remediate the aquifers. Cooper continues to examine the current operation and its effectiveness in removing VOCs from the aquifers. Based on the continued success and the consistent upward trend of cumulative VOCs removed (Figure 15), Cooper does not propose any changes to the current extraction system. When a leveling off of cumulative VOCs removal is noted, Cooper will further evaluate other alternative on/off pumping schedules in an effort to continue favorable contaminant removal rates.

Influent air samples to the cat-ox unit collected from the final RA system since May 1998 have continued to be significantly below the USEPA and KYDEP air emission limits. This represents 14 consecutive quarters of influent air data. Therefore, Cooper requests approval from EPA and the KYDEP to shutdown the cat-ox unit.

Based on the consistency of the data, and groundwater monitoring data available since 1993, we recommend that the groundwater sampling program be reduced to annual monitoring, with a corresponding report to be submitted annually to the KYDEP and EPA. In addition, Cooper requests that air emission samples be collected quarterly instead of monthly due to the consistency of the analytical results.

TABLES

Table 1
Summary of System Maintenance
2002 Second Semi-Annual Monitoring Event
National Electric Coil
Harlan, Kentucky

Month	Operation & Maintenance Description
July	Collected water samples from effluent Collected air samples from effluent
August	System Check - System down at 9:30 am Restarted System at 1:00 pm System Check Checked air flow rate Checked HP on blowers Checked water discharge pipe Cleaned sensors on water meter. Collected water samples from effluent Collected air samples from effluent
September	Checked MW-5-2A pump Cat-OX unit down - Restarted Collected water samples from effluent and influent General ground maintenance (weed control) Checked monitoring well-85 - Pump not operating
October	Collected water samples from effluent Collected air samples from effluent
November	Collected water samples from effluent Collected air samples from effluent
December	Shut down the system on 12/20/02 for preventative maintenance Cleaned and sanitized wells MW-11, R-2 and 5-A Removed and cleaned media from stripper Checked and maintained pumps and piping Restarted system on 1/17/03

Table 2
Summary of KPDES Effluent Limitations
National Electric Coil
Harlan, Kentucky

2002 Permit Limits Effective March 2002					
Effluent Characteristics	Units	Discharge Limitations (1)		Monitoring Requirements (1)	
		Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow	MGD	Report	Report	1/Month	Instantaneous
Trichloroethylene	mg/l	0.04	0.08	1/Month	Grab
1,1-dichloroethylene	mg/l	0.0021	0.0042	1/Month	Grab
Vinyl chloride	mg/l	0.02	0.04	1/Month	Grab
cis-1,2-dichloroethylene	mg/l	0.06	0.12	1/Month	Grab
Benzene	mg/l	0.521	1.042	1/Month	Grab
Zinc (TR)	mg/l	Report	Report	1/Month	Grab
Copper (TR)	mg/l	Report	Report	1/Month	Grab
Methylene Chloride	mg/l	Report	Report	1/Month	Grab
Tetrachloroethylene	mg/l	0.347	0.694	1/Month	Grab
Toluene	mg/l	Report	Report	1/Month	Grab
Ethylbenzene	mg/l	Report	Report	1/Month	Grab
Tetrachloroethane (1,1,2,2)	mg/l	0.074	0.148	1/Month	Grab
pH	Standard Units	>6.0 and <9.0		1/Month	Grab

Notes:

MGD - Million gallons per day

mg/l - milligrams per liter

TR - Total recoverable

Table 3
Groundwater Monitoring Network
National Electric Coil
Harlan, Kentucky

Monitoring Requirement	Shallow	Intermediate	Deep
Groundwater Levels Only	BH-0 BH-1 BH-2 BH-3 BH-4 BH-5	CMW-5-11A CMW-5-11B	CMW-5-0 CMW-12A CMW-87 CMW-127
Groundwater Levels and Groundwater Samples	Trench	R-2 CMW-12	CMW-5-2 CMW-5-2A CMW-5-10 CMW-5-11 CMW-6 CMW-7 CMW-9 CMW-12-16 CMW-13 CMW-85

Table 4
Groundwater Recovery System Efficiency
Second Semi-Annual 2002 Monitoring Event
National Electric Coil
Harlan, Kentucky

Month	Total Flow (millions of gallons)	Influent Concentrations (ug/l)			Effluent Concentrations (ug/l)			VOCs removed by system (pounds)			Total VOCs Removed (lbs)	System Efficiency (%)
		cis- 1,2-DCE	TCE	Vinyl Chloride	cis- 1,2-DCE	TCE	Vinyl Chloride	cis- 1,2-DCE	TCE	Vinyl Chloride		
July	6.182	440	26	29	33	2.5	2.5	21.0	1.2	1.4	23.6	92.3%
August	5.704	430	22	29	42	2.5	2.5	18.5	0.9	1.3	20.6	90.2%
September	6.090	320	31	39	45	2.5	2.5	14.0	1.4	1.9	17.3	87.2%
October	6.501	320	31	39	32	2.5	2.5	15.6	1.5	2.0	19.1	90.5%
November	6.562	320	31	39	31	2.5	2.5	15.8	1.6	2.0	19.4	90.8%
December	6.220	310	60	27	14	2.5	<i>1</i>	15.4	3.0	1.3	19.7	95.6%
Total	37.259	---	---	---	---	---	---	100.2	9.7	9.8	119.7	
											Average Efficiency	91.1%

Notes:

July Influent concentrations estimated bases on sample collected in June 2002

October and November Influent concentrations estimated based on sample collected in September 2002

Italic numbers indicate that the target compound was not detected and one-half of the detection limit was used in calculations.

System Influent generally sampled on quarterly basis.

System Effluent is required to be sampled monthly under new KPDES Permit.

Table 5
Air Emissions Analytical Results and System Efficiency
Second Semi-Annual 2002 Monitoring Event
National Electric Coil
Harlan, Kentucky

Sample Date:	Air Stripper Exhaust Gas (Cat-Ox Influent) Analytical Results (ppbv)			Catalytic Oxidation Stack Effluent Emission Analytical Results (ppbv)			System Efficiency (%)
	1,2-DCE	TCE	Vinyl Chloride	1,2-DCE	TCE	Vinyl Chloride	
7/24/2002	2990 (2)	188 (2)	417 (2)	<1.6	<1.6	<1.6	100.00%
8/24/2002	2990 (2)	188 (2)	417 (2)	<1.5	<1.5	<1.5	100.00%
9/27/2002	2990	188	417	57.1	3.3	<2.9	98.32%
10/19/2002	1550 (3)	23 (3)	205 (3)	<1.4	<1.4	<1.4	100.00%
11/21/2002	1550 (3)	23 (3)	205 (3)	<1.4	<1.4	<1.4	100.00%
12/20/2002	1550	22.5	205	<1.4	<1.4	<1.4	100.00%
EPA Standard (1)	5,850,000	19,600	837	5,850,000	19,600	837	NA
Average							99.72%

Notes:

(1) - USEPA Treatment System Air Emission Limits established under the ROD.

(2) - July and August 2002 Influent Data based on quarterly sample collected in September 2002.

(3) - October and November 2002 Influent data based on quarterly sample collected in December 2002

NA - Not Applicable

Table 6
Groundwater Elevation Data
2002 Second Semi-Annual Monitoring Event
National Electric Coil
Harlan, Kentucky

Well ID	Groundwater Zone	Top of Casing Elevation	Depth To Water (9/25/02)	Groundwater Elevation (9/25/02)
CMW-5-0	Deep	1161.92	70.34	1091.58
CMW-5-2	Deep	1158.16	65.37	1092.79
CMW5-10	Deep	1158.98	42.33	1116.65
CMW 5-2A	Deep	1159.04	79.56	1079.48
CMW-5-11A	Intermediate	1158.44	42.70	1115.74
CMW-5-11B	Intermediate	1158.46	32.16	1126.30
CMW-6	Deep	1158.37	44.15	1114.22
CMW-7	Deep	1153.92	43.23	1110.69
CMW-9	Deep	1174.4	61.41	1112.99
CMW-12	Intermediate/Deep	1156.32	44.54	1111.78
CMW-12A	Deep	1156.25	41.25	1115.00
CMW-12-16	Deep	1159.31	49.05	1110.26
CMW-13	Deep	1173	46.95	1126.05
CMW-13A	Deep	1173.34	55.10	1118.24
CMW-85	Deep	1150.54	37.61	1112.93
CMW-87	Deep	1151.04	36.20	1114.84
BH-0	Shallow	1160.46	10.86	1149.60
BH-1	Shallow	1159.5	17.79	1141.71
BH-2	Shallow	1158.22	17.23	1140.99
BH-3	Shallow	1158.86	Dry - 18.80	<1140.06
BH-4	Shallow	1158.69	18.84	1139.85
BH-5	Shallow	1158.85	Dry - 24.71	<1134.14
R-2	Intermediate	1155.39	37.19	1118.20
Interceptor Trench	Shallow	1156.37	20.44	1135.93

Table 7
Summary of Groundwater Analytical Results
2002 Second Semi-Annual Monitoring Event
National Electric Coil
Harlan, Kentucky

Sample Location: Sample Date:	Monitoring Wells									MCL
	CMW-5-2 09/25/02	CMW-12 09/25/02	CMW-12-16 09/25/02	CMW-13 09/25/02	CMW-6 09/25/02	CMW-7 09/25/02	CMW-85 09/25/02	CMW-9 09/25/02	CMW-5-10 09/25/02	
Volatile Organic Compounds (ug/l)										
Acetone	<10	<10	<10	<10	<10	<10	NA	<10	<10	N/A
Benzene	<5	<5	<5	<5	<5	<5	NA	<5	<5	5
1,1-Dichloroethene	2.6J	<2	<2	<2	<5	1.2J	NA	<2	<5	7
cis-1,2-Dichloroethene	1100	93	<5	<5	<5	610	NA	15	11	70
trans-1,2-Dichloroethene	5.6	<5	<5	<5	<5	<5	NA	<5	<5	100
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	NA	<5	<5	N/A
Tetrachloroethene	<5	<5	<5	<5	<5	<5	NA	<5	<5	5
Trichloroethene	40	<5	<5	<5	<5	<5	NA	<5	<5	5
Vinyl chloride	22	5.7	1.2J	<2	<2	23	NA	1.7J	<2	2

Sample Location: Sample Date:	Extraction Wells				MCL
	CMW-5-11 09/25/02	CMW-5-2A 09/25/02	R-2 09/25/02	Trench 09/25/02	
Volatile Organic Compounds (ug/l)					
Acetone	3.0J	<10	<10	<10	N/A
Benzene	<5	<5	5	<5	5
1,1-Dichloroethene	<5	<5	<5	<5	7
cis-1,2-Dichloroethene	260	700	1200	69	70
trans-1,2-Dichloroethene	<5	3.4J	6.4	<5	100
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	N/A
Tetrachloroethene	<5	<5	<5	<5	5
Trichloroethene	<5	85	130	1300	5
Vinyl chloride	22	25	35	<2	2

Notes:

J - Estimated Value

N/A - Not Applicable

Table 8
Summary of QA/ QC Analytical Results
2002 Second Semi-Annual Monitoring Event
National Electric Coil
Harlan, Kentucky

Sample Identification: Sample Date:	Duplicate Analysis			Equipment Blank	Field Blank
	CMW-7 9/25/2002	Duplicate* 09/25/02	%RPD		
Volatile Organic Compounds (ug/l)					
Acetone	<10	<10	NA	35 (1)	42 (1)
Benzene	<5	<5	NA	<5	<5
2-Butanone	<10	<10	NA	<5	2.7
1,1-Dichloroethene	<5	<5	NA	<2	<2
cis-1,2-Dichloroethene	610	520	15.9%	<5	<5
trans-1,2-Dichloroethene	<5	<5	NA	<5	<5
Trichloroethene	<5	2.5J	NA	<5	<5
Vinyl chloride	23	23	0.0%	<2	<2

Notes:

1 - Not a site contaminant - Laboratory Artifact

* Duplicate sample of CMW-7

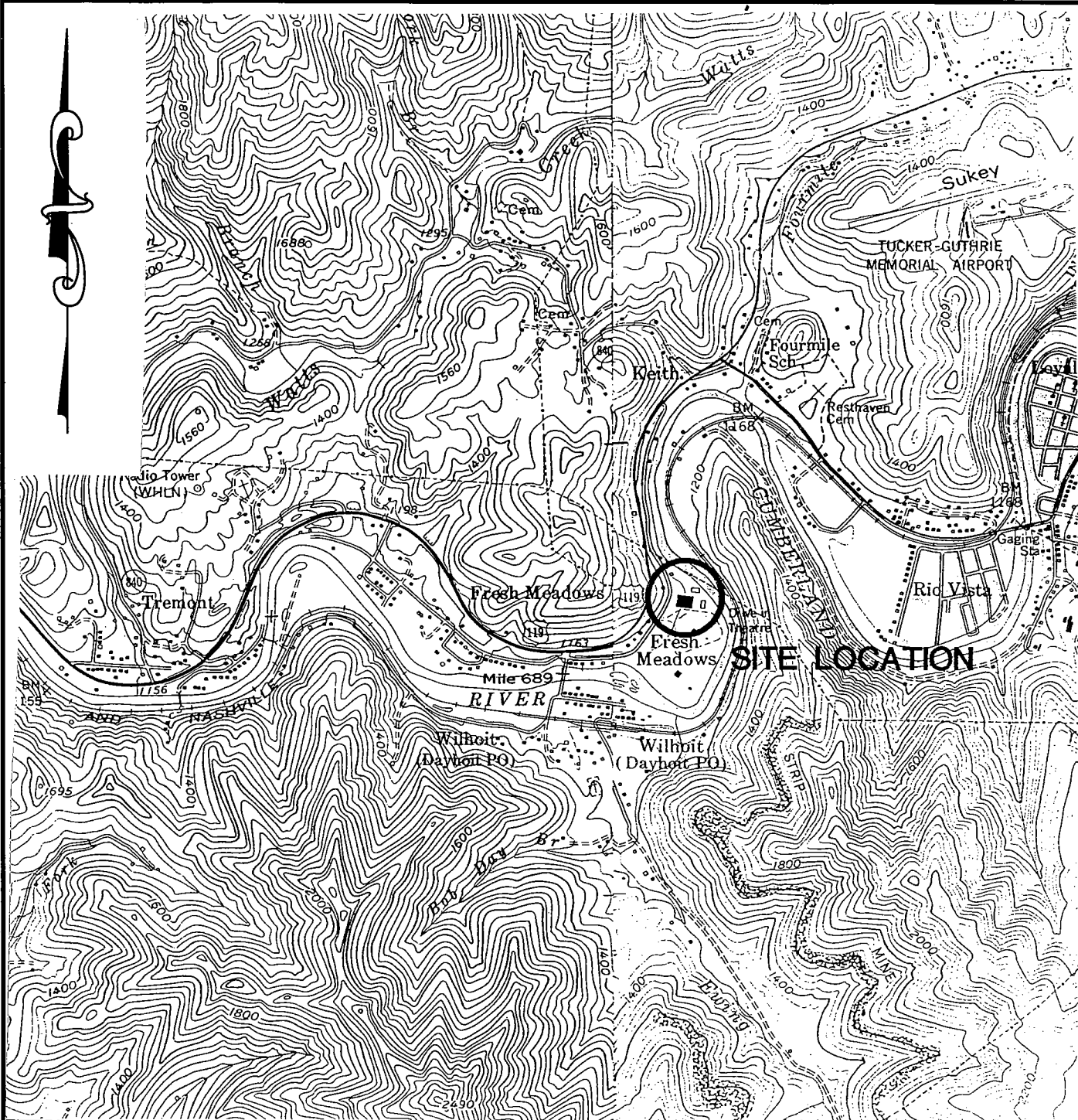
Acceptable %RPD limits are $\pm 20\%$

J - Estimated Value

NA - Not Applicable

FIGURES

G:\PROJECTS\200274\0104-HARLAN-KENTUCKY\FIGUREX.DWG (SMM) - JUL 20, 2000 - 14:07:24



Reference:

**USGS 7.5-Min Topographic Quadrangle
Harlan, Kentucky/Wallins Creek, Kentucky**

SCALE IN FEET



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**SITE LOCATION MAP
NATIONAL ELECTRIC COIL SITE
HARLAN, KENTUCKY**

DWN. BY: SMM

SCALE:

1"=2000'

DATE:

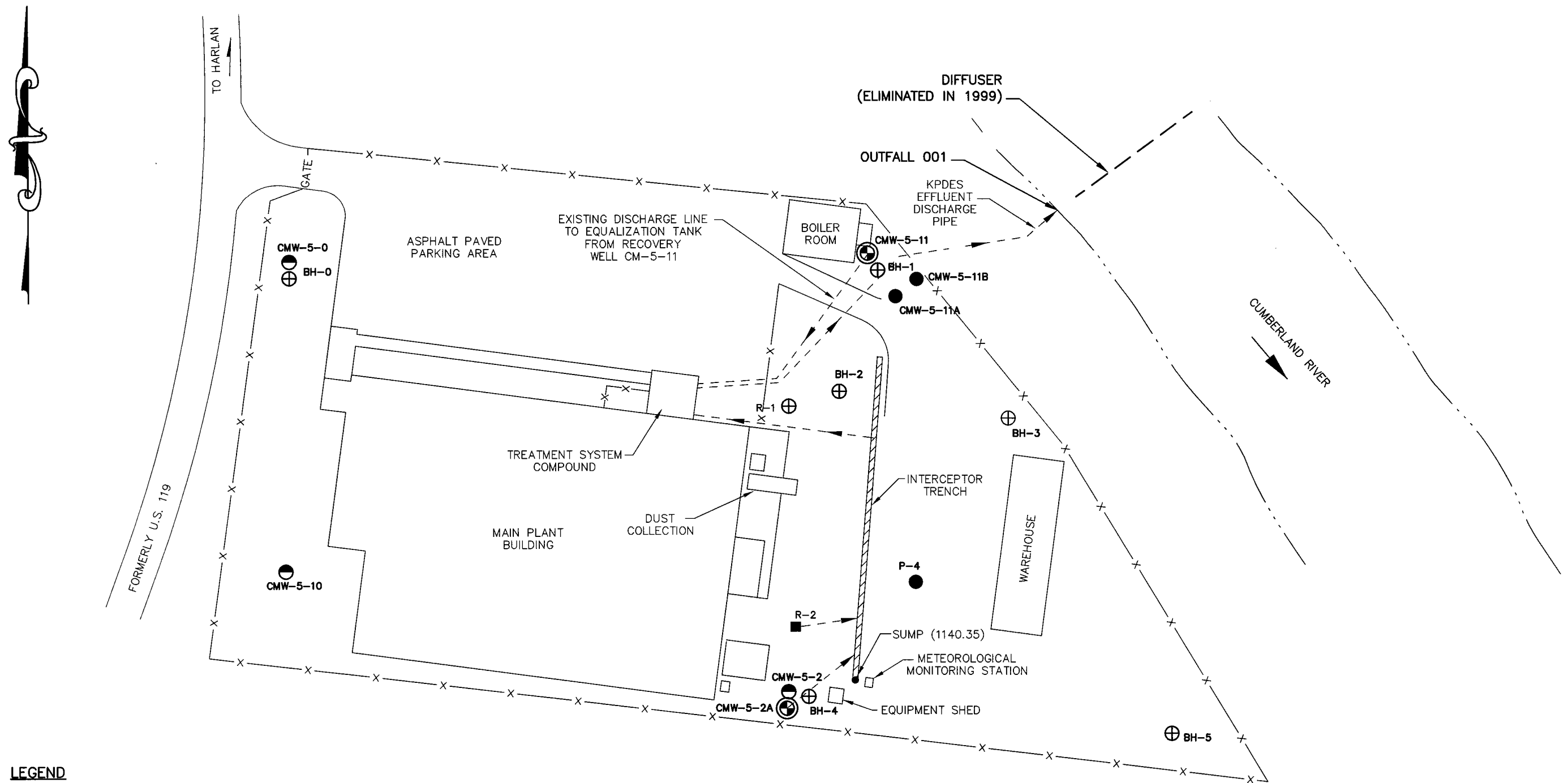
7/20/00

200658

FIGURE 1

CHKD. BY:

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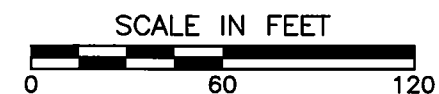



LEGEND

- GROUNDWATER INTERCEPTOR TRENCH IN ALLUVIUM
- - - LOCATION OF TRENCH FOR RECOVERY WELL AND SUMP DISCHARGE LINES AND ELECTRICAL SERVICES (POWER AND CONTROL CABLE) TO RECOVERY WELL AND SUMP.
- x - FENCE LINE
- BH-0 ⊕ ALLUVIAL AQUIFER WELL MEASURED ON SEPTEMBER 11, 2001
- CMW-5-0 ● BEDROCK AQUIFER WELL
- R-2 ■ INTERMEDIATE BEDROCK AQUIFER RECOVERY WELL
- P-4 ● INTERMEDIATE BEDROCK AQUIFER PIEZOMETER
- CMW-5-2 ⊕ DEEPER BEDROCK AQUIFER RECOVERY WELL

REFERENCE:

LAW ENGINEERING AND ENVIRONMENTAL SERVICES
REMEDIAL ACTION STATUS REPORT, FEBRUARY, 1999.

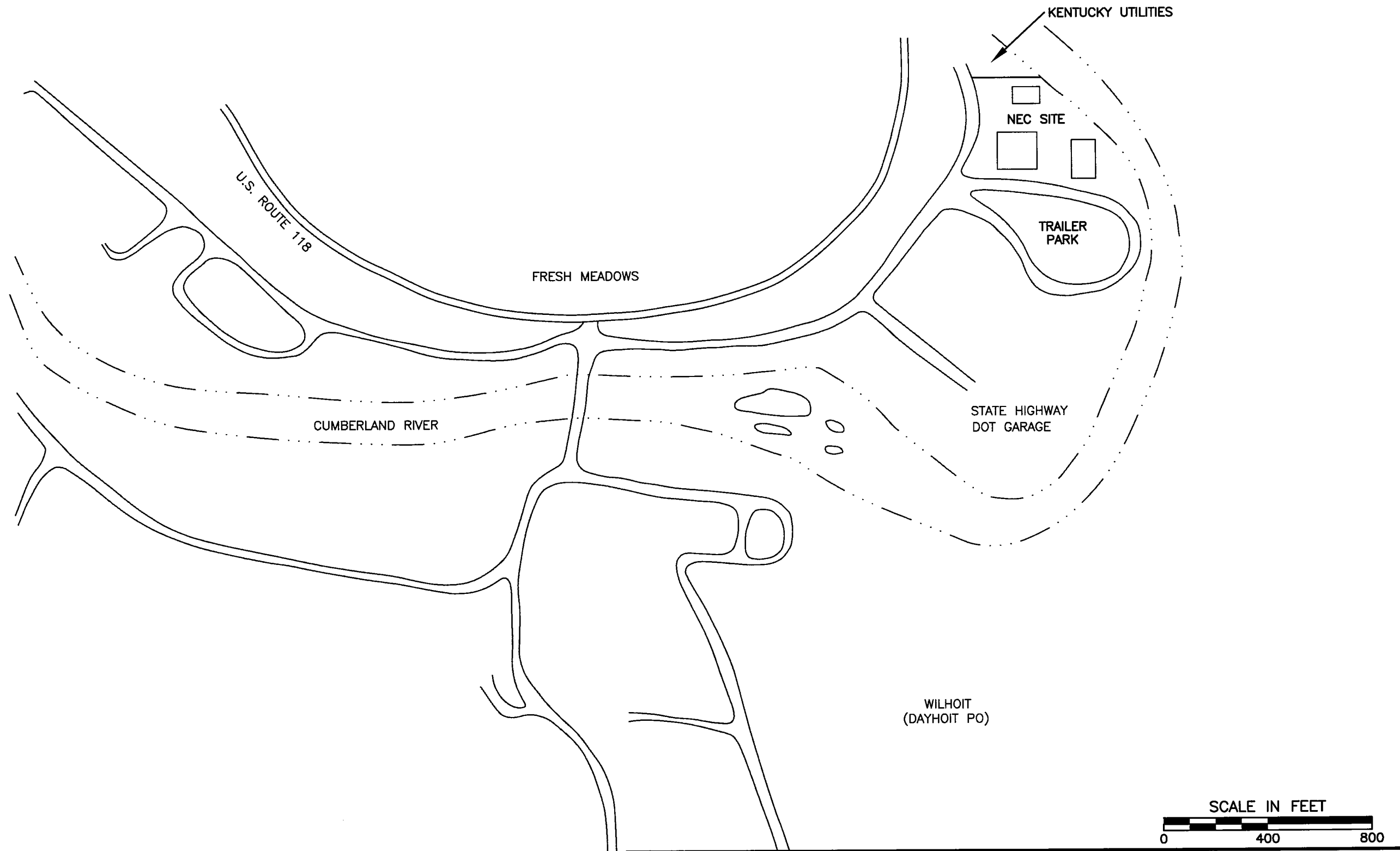


 Civil & Environmental Consultants, Inc. Pittsburgh, PA 15205 (412) 429-2324 • (800) 365-2324 Cincinnati, OH • Columbus, OH • Indianapolis, IN • Nashville, TN			FACILITY LAYOUT NATIONAL ELECTRIC COIL SITE HARLAN, KENTUCKY	
DWN. BY: SMM	SCALE: 1"=60'	DATE: 12/08/2002	200658	FIGURE 2
CHKD. BY:				

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REFERENCE:

LAW ENGINEERING AND ENVIRONMENTAL SERVICES
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DWN. BY: SMM

SCALE:
1"=400'

DATE:
7/19/2000

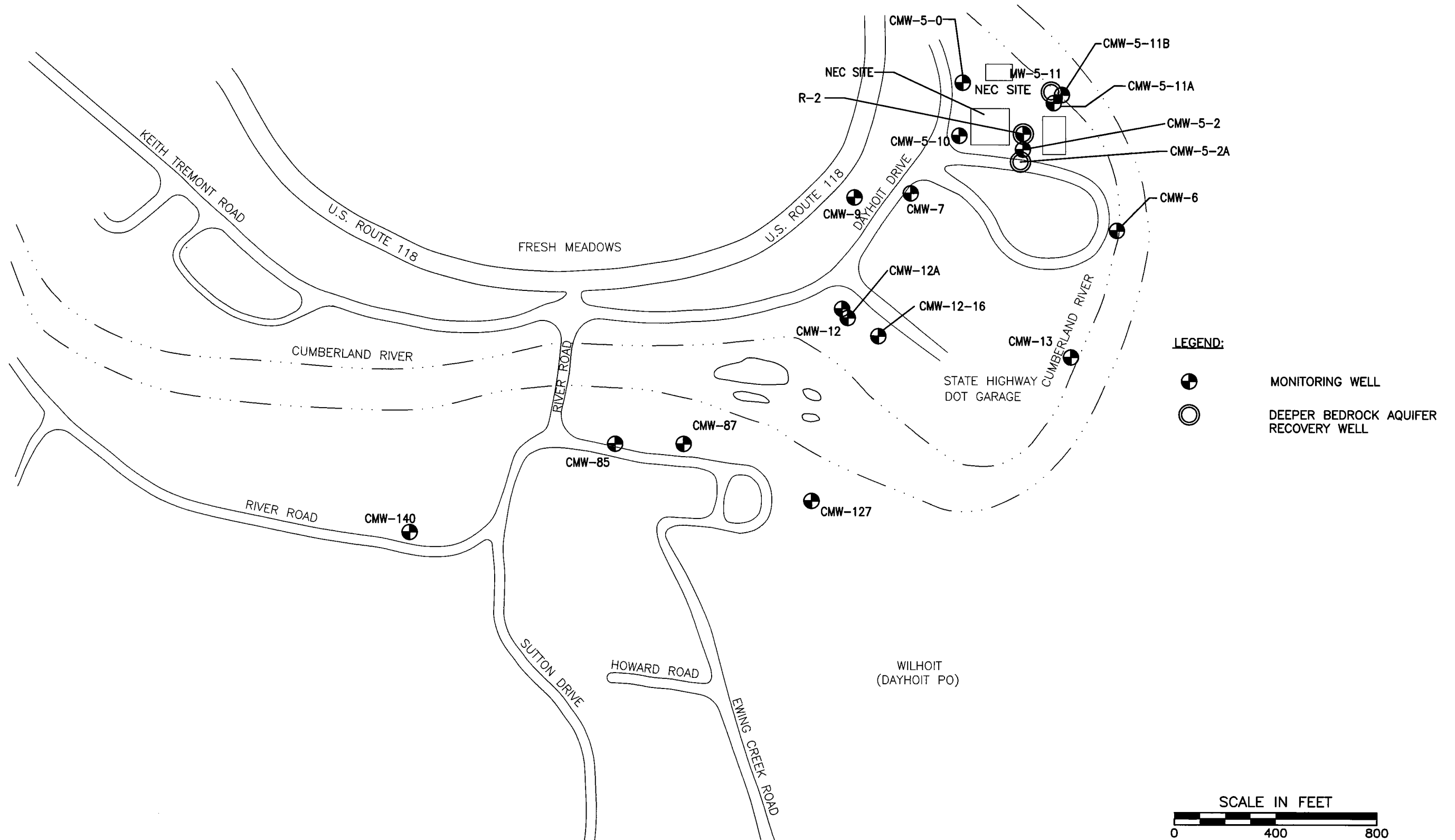
CHKD. BY:

**SITE LAYOUT PLAN
NATIONAL ELECTRIC COIL SITE
HARLAN, KENTUCKY**

PROJECT NO:
200658

FIGURE 3

G:\PROJECTS\2000\200274\0104-HARLAN-KENTUCKY\FIGUREX.DWG (kpatrickus) - DEC 06, 2002 - 09:00:40



REFERENCE:

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DWN BY: ENN

CHKD. BY:

SCALE:

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DATE:

12/08/2002

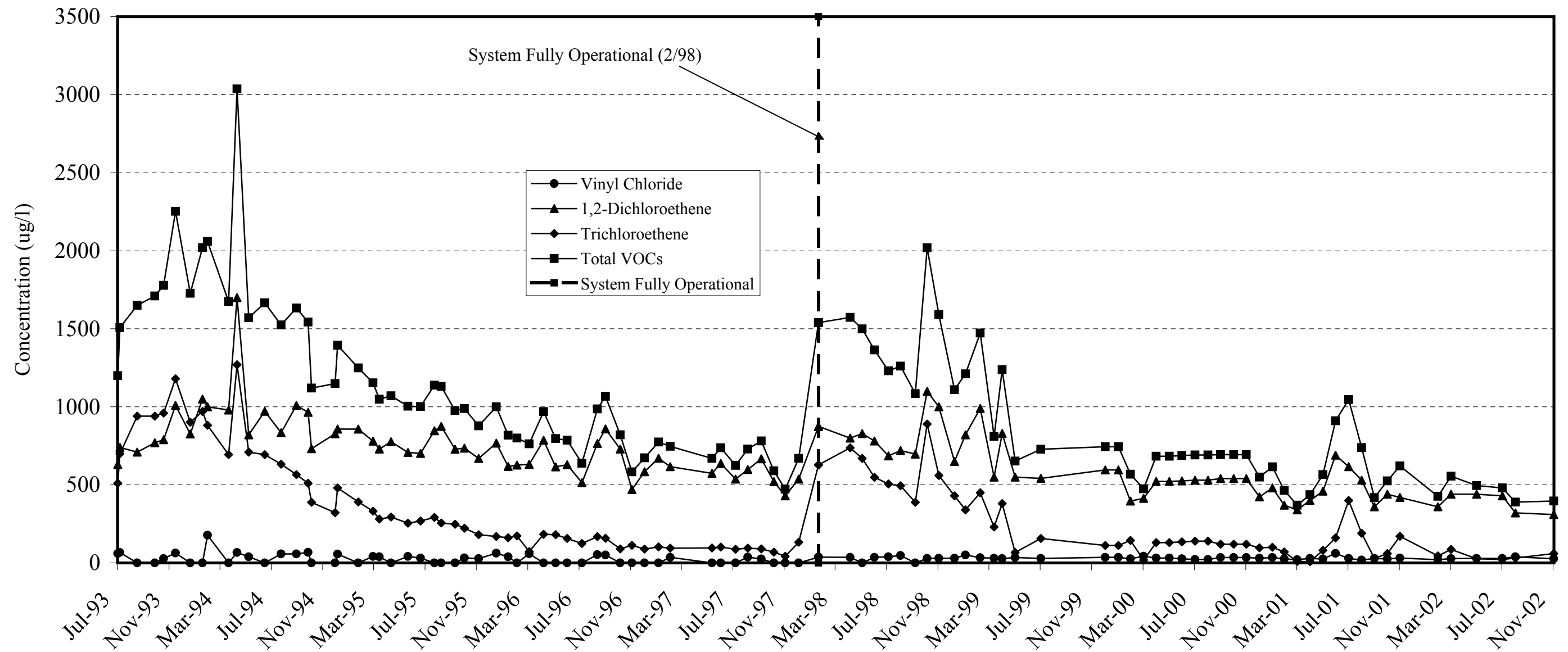
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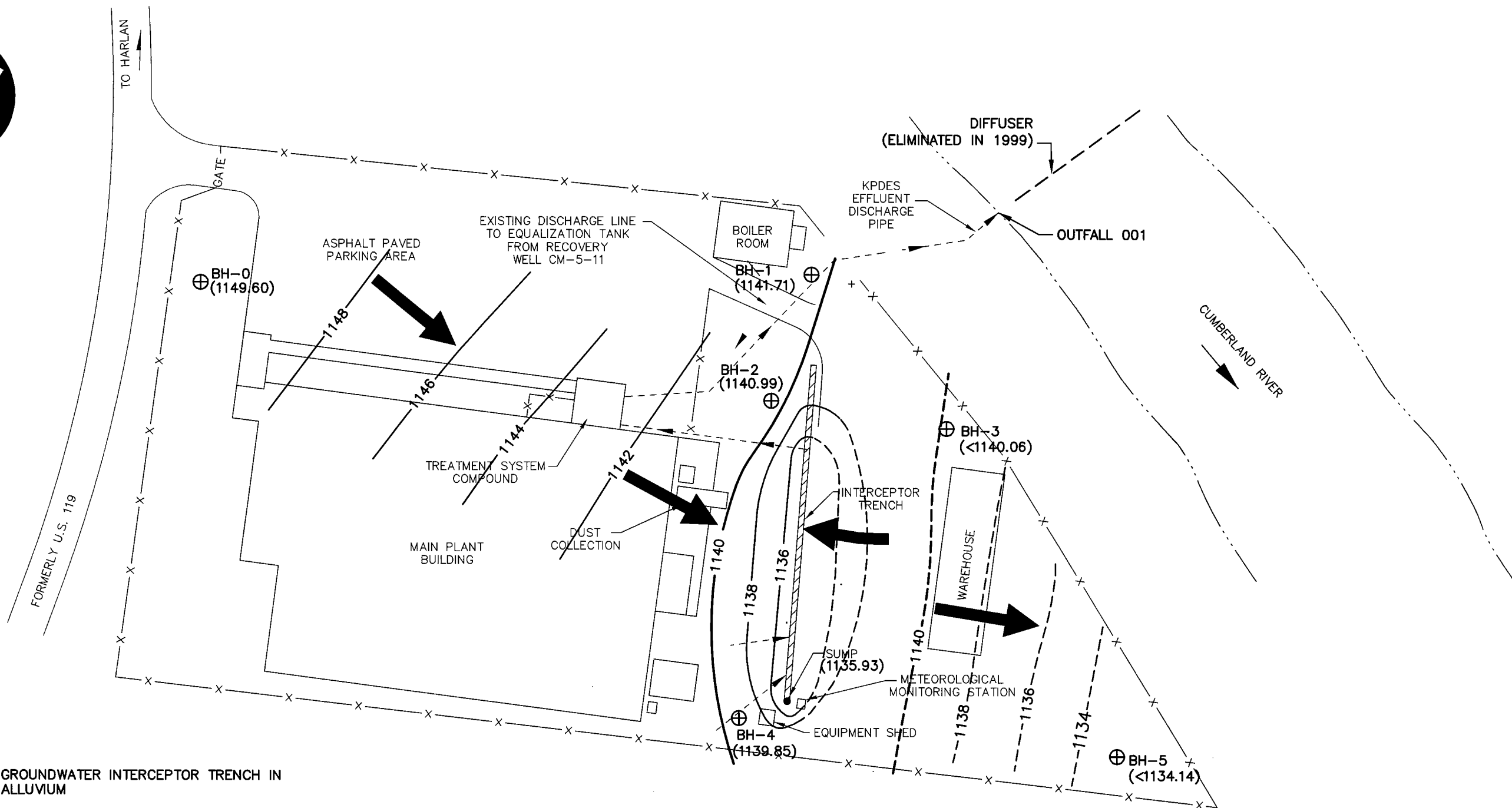
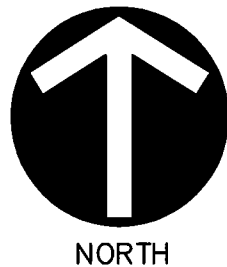
200658

**MONITORING WELL LOCATIONS
NATIONAL ELECTRIC COIL SITE
HARLAN, KENTUCKY**

FIGURE 4

Figure 5
Influent VOC Concentrations Versus Time
 National Electric Coil Facility
 Harlan, Kentucky





LEGEND

- GROUNDWATER INTERCEPTOR TRENCH IN ALLUVIUM
- GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
- ALLUVIAL AQUIFER WELL
- (1141.71) GROUNDWATER ELEVATION

GROUNDWATER CONDITIONS

THE WATER LEVELS PRESENTED IN THIS REPORT ARE APPLICABLE TO THE LOCATION AND TIME OF MEASUREMENT. WATER LEVELS MAY FLUCTUATE THROUGH TIME.

POTENTIOMETRIC CONTOUR MAPS GENERATED FROM THIS DATA ARE CONSTRUCTED BY INTERPOLATION BETWEEN POINTS OF KNOWN STATIC WATER LEVEL ELEVATIONS AND USING KNOWLEDGE OF SPECIFIC SITE CONDITIONS. ACTUAL STATIC WATER LEVELS AT LOCATIONS BETWEEN THE MONITORING POINTS MAY DIFFER FROM THOSE DEPICTED.

SCALE IN FEET
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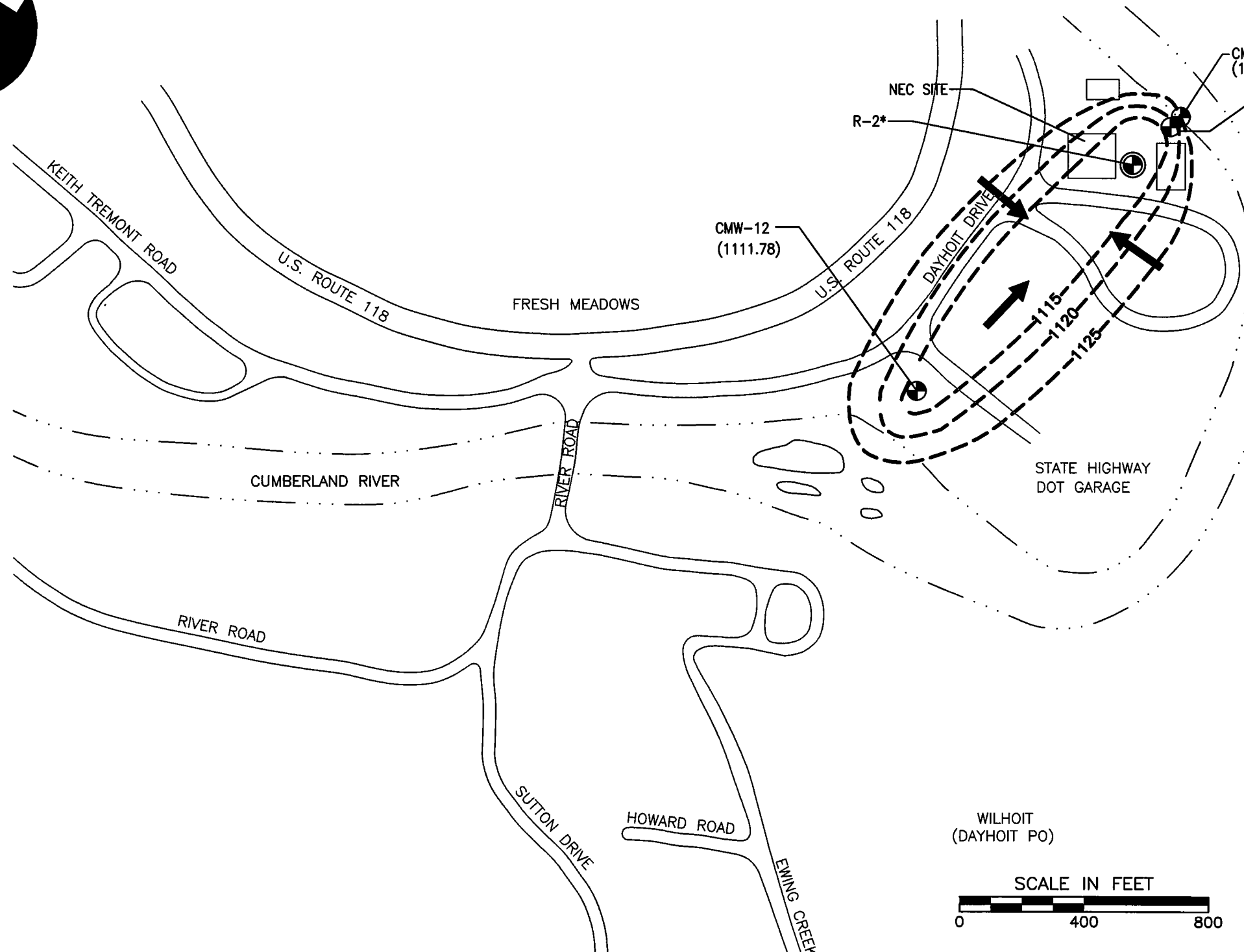
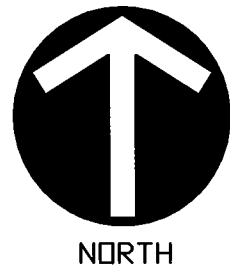
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DWN. BY: EMN	SCALE: 1"=60'	DATE: 12/10/02
CHKD. BY: REM		



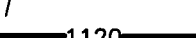

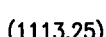
SHALLOW AQUIFER POTENTIOMETRIC
SURFACE MAP
NATIONAL ELECTRIC COIL SITE
HARLAN, KENTUCKY

PROJECT NO: 200658	FIGURE NO: FIGURE 6
---------------------------	----------------------------

G:\PROJECTS\2000\200658\DWG\FIGUREX-DECEMBER 2002.DWG (kpatrickus) - FEB 18, 2003 - 16:13:44



LEGEND:

-  MONITORING WELL
-  INTERMEDIATE BEDROCK AQUIFER RECOVERY WELL
-  GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
-  GROUNDWATER FLOW DIRECTION
-  (1113.25) GROUNDWATER ELEVATION

GROUNDWATER CONDITIONS

THE WATER LEVELS PRESENTED IN THIS REPORT ARE APPLICABLE TO THE LOCATION AND TIME OF MEASUREMENT. WATER LEVELS MAY FLUCTUATE THROUGH TIME.

POTENTIOMETRIC CONTOUR MAPS GENERATED FROM THIS DATA ARE CONSTRUCTED BY INTERPOLATION BETWEEN POINTS OF KNOWN STATIC WATER LEVEL ELEVATIONS AND USING KNOWLEDGE OF SPECIFIC SITE CONDITIONS. ACTUAL STATIC WATER LEVELS AT LOCATIONS BETWEEN THE MONITORING POINTS MAY DIFFER FROM THOSE DEPICTED.

GROUNDWATER CONTOURS BASED ON HISTORIC PUMP TEST DATA.

* INCORRECT WATER LEVEL RECORDED FROM R-2 DUE TO BACTERIA AND IRON FILTER. THE WELL WAS CLEARED AND SANITIZED AFTER SAMPLING EVENT.

REFERENCE:

LAW ENGINEERING AND ENVIRONMENTAL SERVICES
REMEDIAL ACTION STATUS REPORT, FEBRUARY, 1999.



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DWN. BY: CEM

CHKD. BY: REM

SCALE:

1"=400'

DATE:

12/10/02

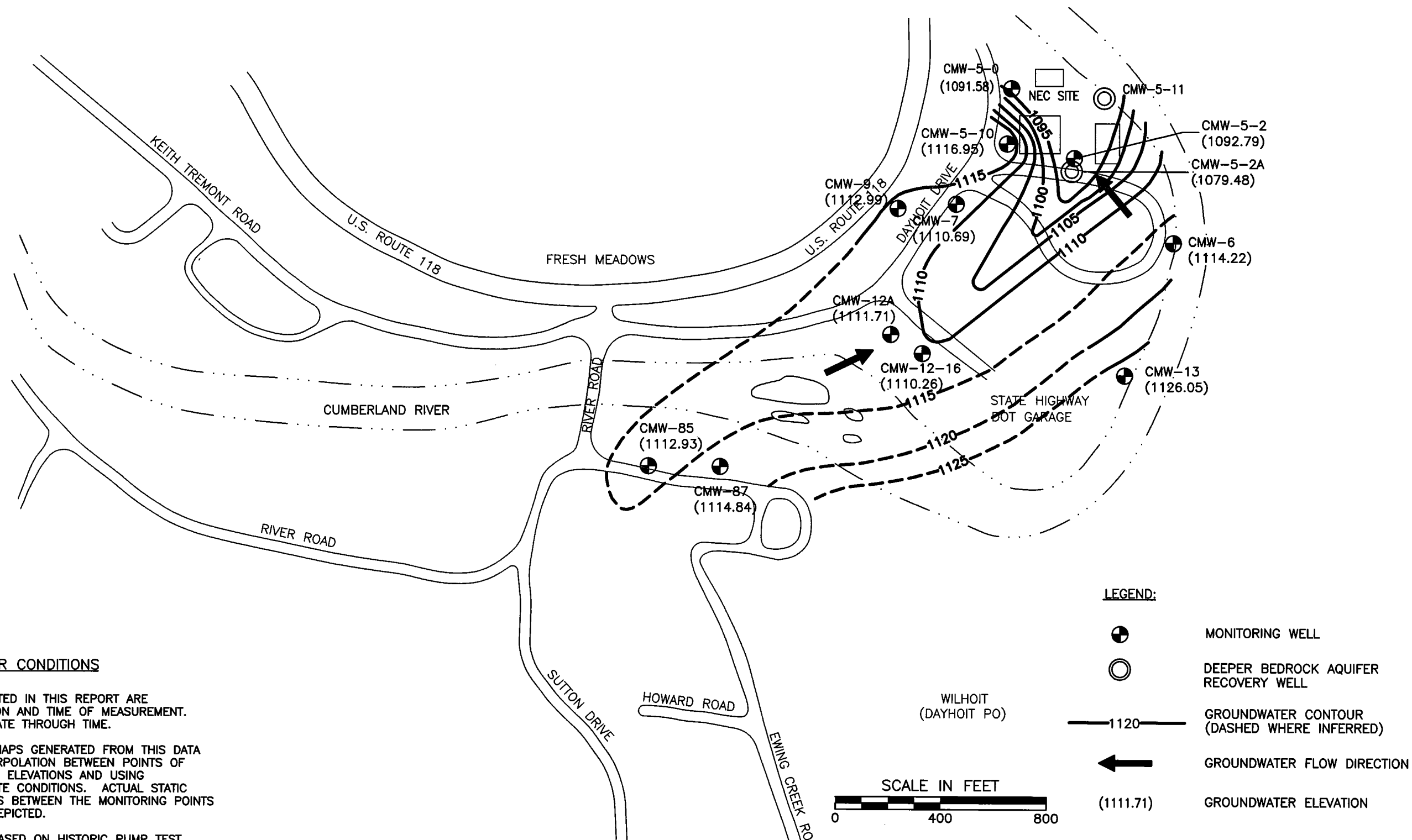
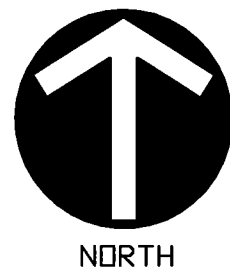
INTERMEDIATE BEDROCK AQUIFER
POTENTIOMETRIC SURFACE MAP
NATIONAL ELECTRIC COIL SITE
HARLAN, KENTUCKY

PROJECT NO:

200658

FIGURE NO:

FIGURE 7



GROUNDWATER CONDITIONS

THE WATER LEVELS PRESENTED IN THIS REPORT ARE APPLICABLE TO THE LOCATION AND TIME OF MEASUREMENT. WATER LEVELS MAY FLUCTUATE THROUGH TIME.

POTENTIOMETRIC CONTOUR MAPS GENERATED FROM THIS DATA ARE CONSTRUCTED BY INTERPOLATION BETWEEN POINTS OF KNOWN STATIC WATER LEVEL ELEVATIONS AND USING KNOWLEDGE OF SPECIFIC SITE CONDITIONS. ACTUAL STATIC WATER LEVELS AT LOCATIONS BETWEEN THE MONITORING POINTS MAY DIFFER FROM THOSE DEPICTED.

GROUNDWATER CONTOURS BASED ON HISTORIC PUMP TEST DATA.

GROUNDWATER AROUND CMW-5-2A NOT CONTOURED DUE TO STEEP GRADIENT AND WELL LOSS IN THE EXTRACTION WELL.

REFERENCE:

LAW ENGINEERING AND ENVIRONMENTAL SERVICES
REMEDIAL ACTION STATUS REPORT, FEBRUARY, 1999.

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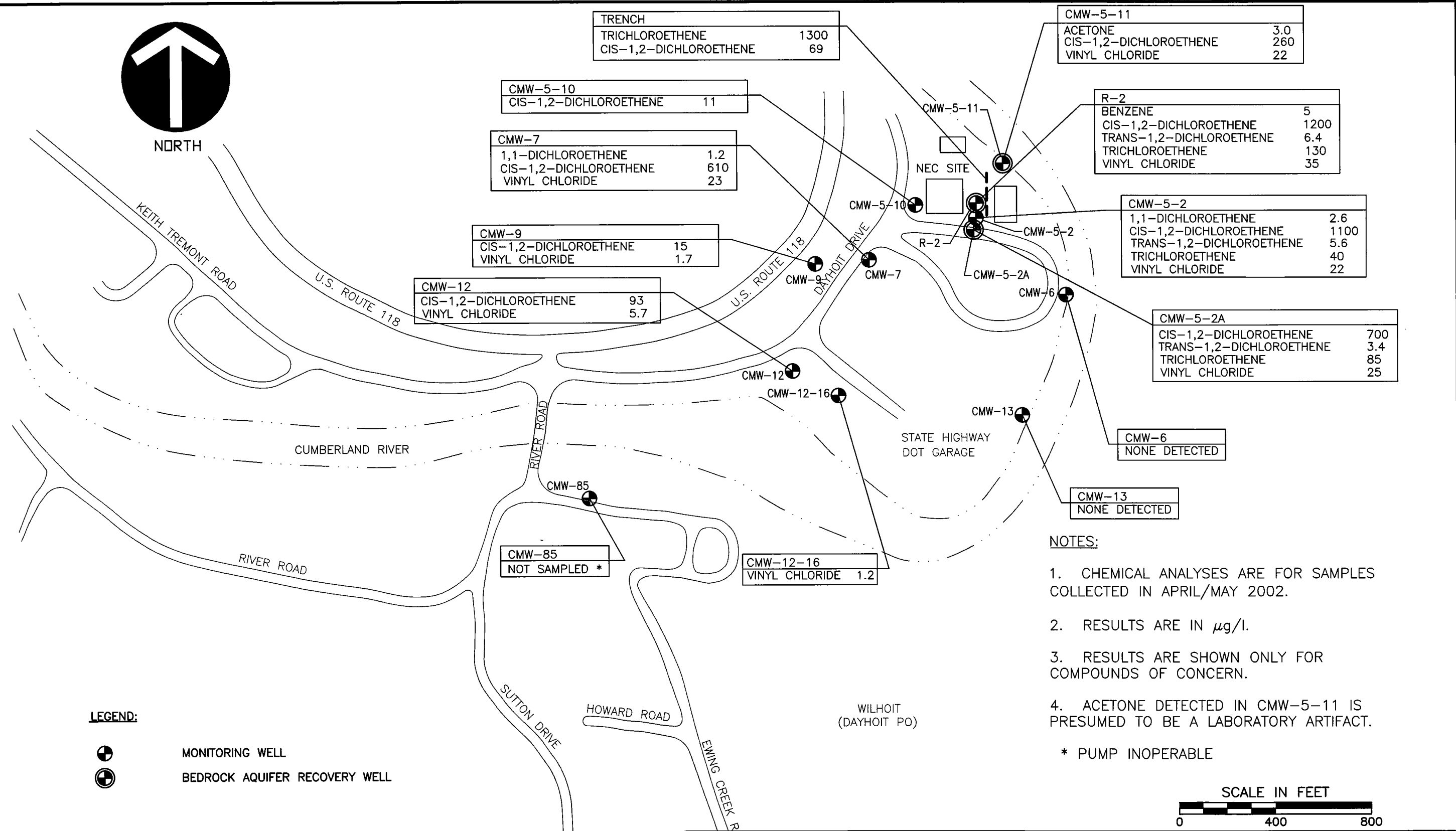
DWN. BY: JSC	SCALE: 1"=400'	DATE: 12/10/02
CHKD. BY: REM		

DEEP BEDROCK AQUIFER
POTENTIOMETRIC SURFACE MAP
NATIONAL ELECTRIC COIL SITE
HARLAN, KENTUCKY

PROJECT NO.:
200658

FIGURE NO.:
FIGURE 8

G:\PROJECTS\2000\200658\DWG\FIGURES-DECEMBER 2002.DWG (carter) - FEB 20, 2003 - 10:36:53




 Civil & Environmental Consultants, Inc. Pittsburgh, PA 15205 (412) 429-2324 • (800) 365-2324 Cincinnati, OH • Columbus, OH • Indianapolis, IN • Nashville, TN			GROUNDWATER CHEMISTRY MAP NATIONAL ELECTRIC COIL SITE HARLAN, KENTUCKY	
DWN. BY: JSC CHKD. BY: REM	SCALE: 1"=400'	DATE: 12/10/02	PROJECT NO: 200658	FIGURE 9

Figure 10
CMW-5-2, VOC Concentrations Versus Time
National Electric Coil Facility
Harlan, Kentucky

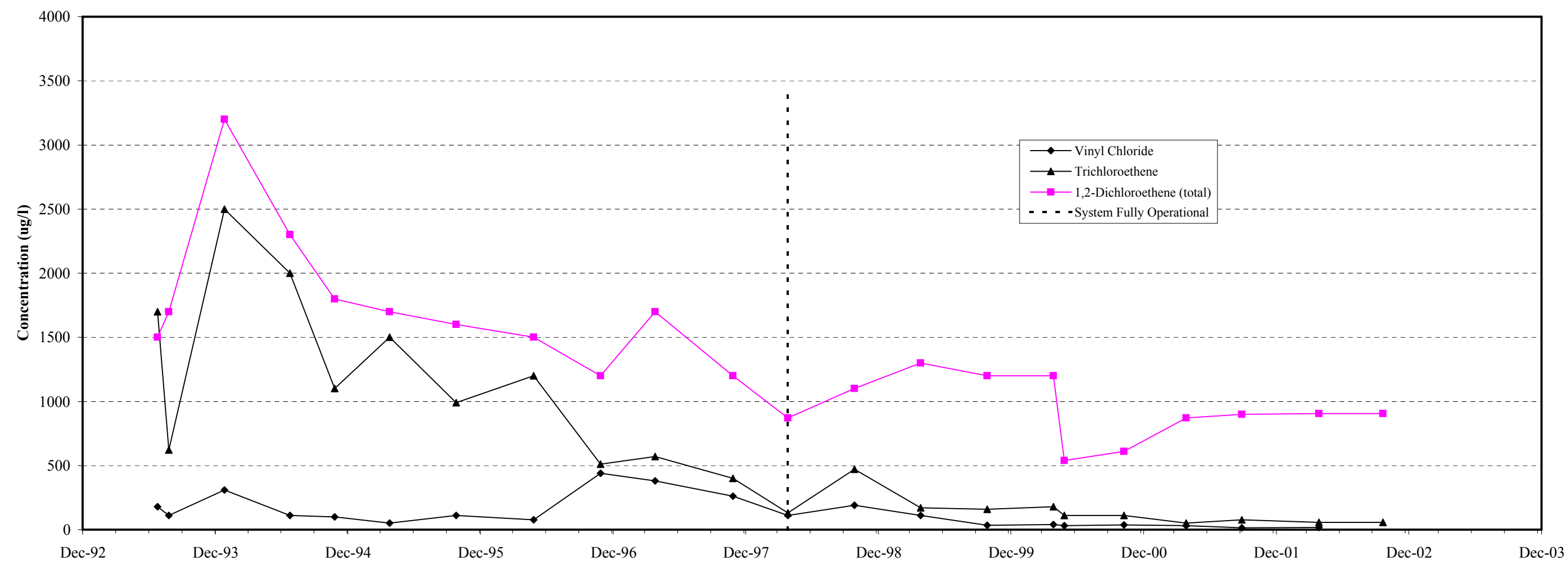


Figure 11
CMW-5-11, VOC Concentrations Versus Time
National Electric Coil Facility
Harlan, Kentucky

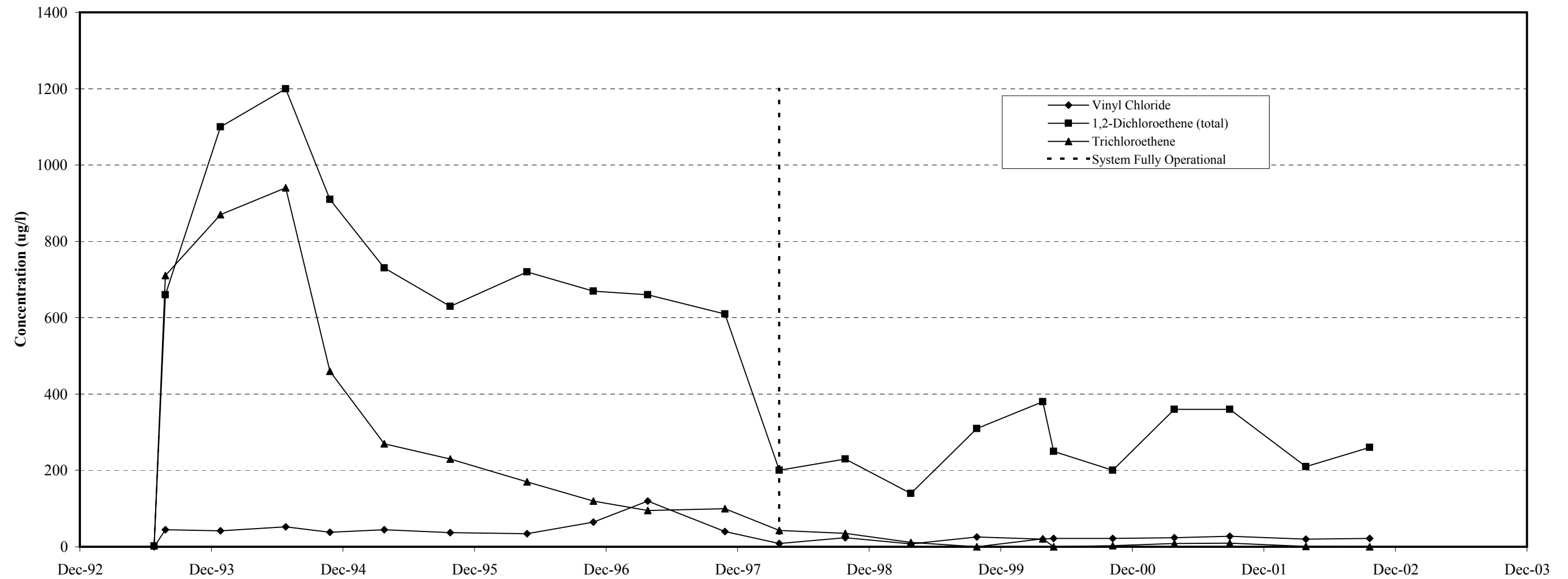


Figure 12
CMW-7, VOC Concentrations Versus Time
National Electric Coil Facility
Harlan, Kentucky

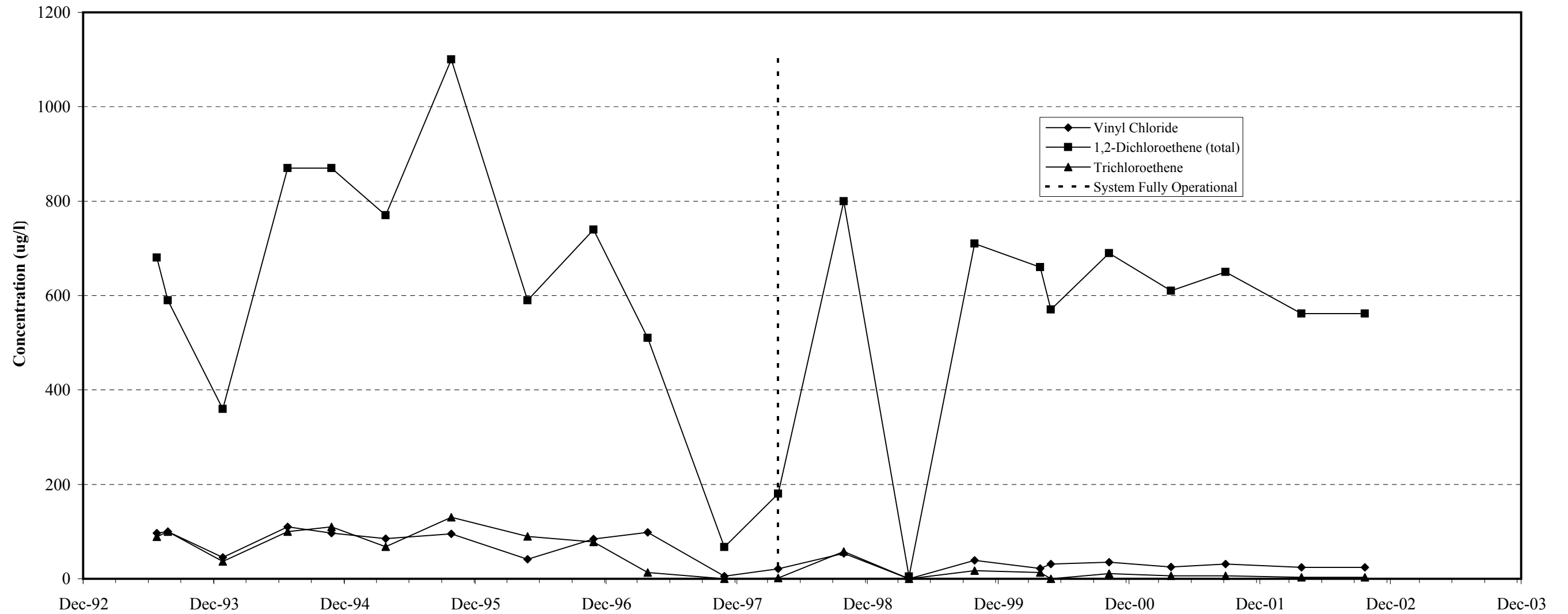


Figure 13
CMW-12, VOC Concentrations Versus Time
National Electric Coil Facility
Harlan, Kentucky

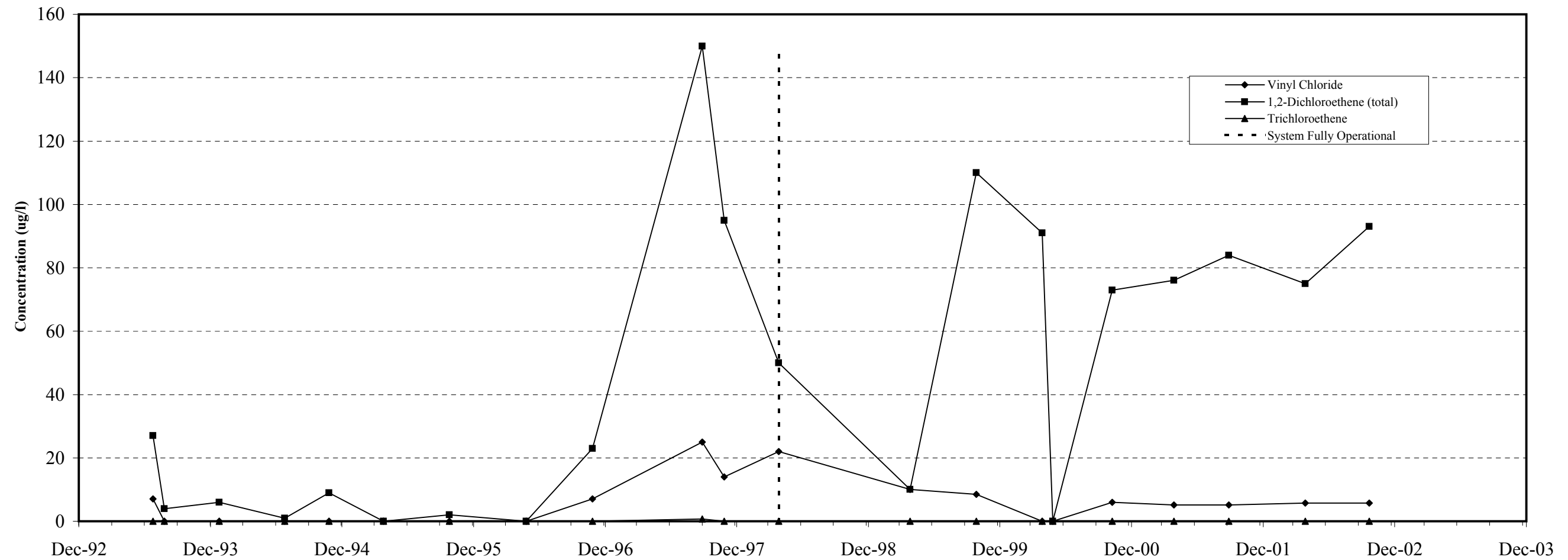


Figure 14
CMW-85, VOC Concentrations Versus Time
 National Electric Coil Facility
 Harlan, Kentucky

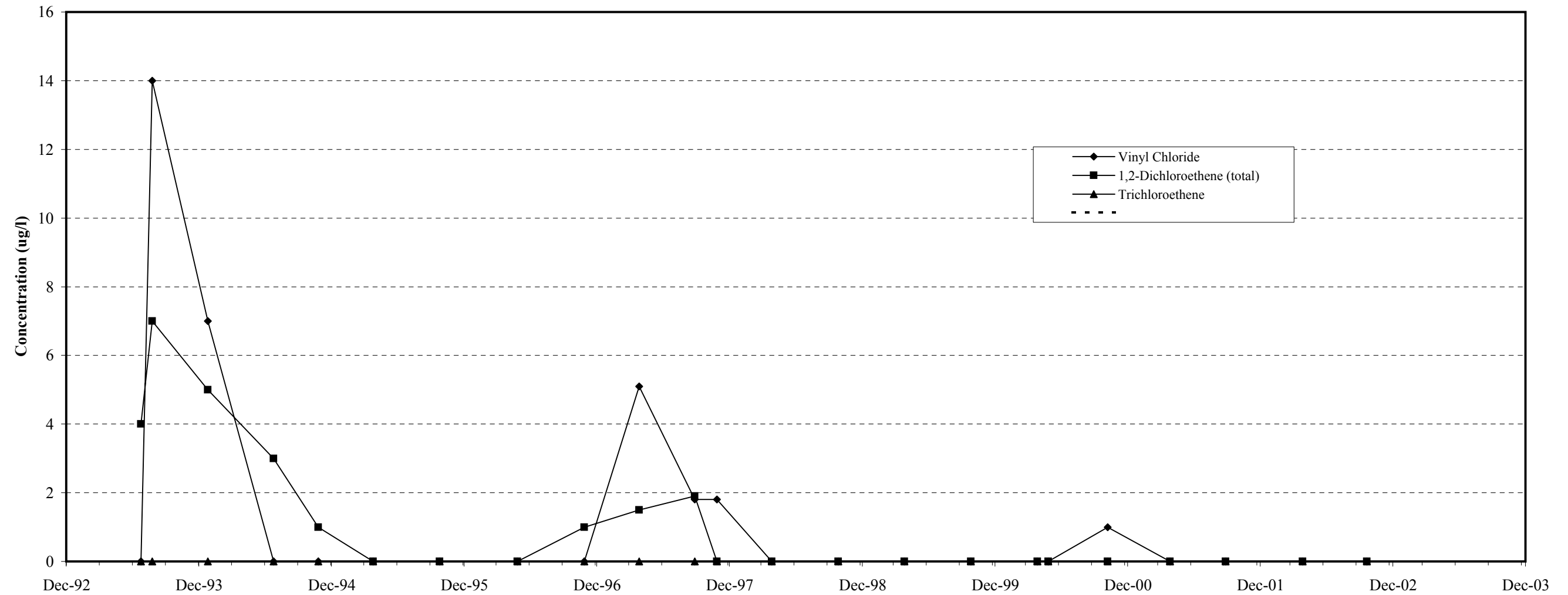
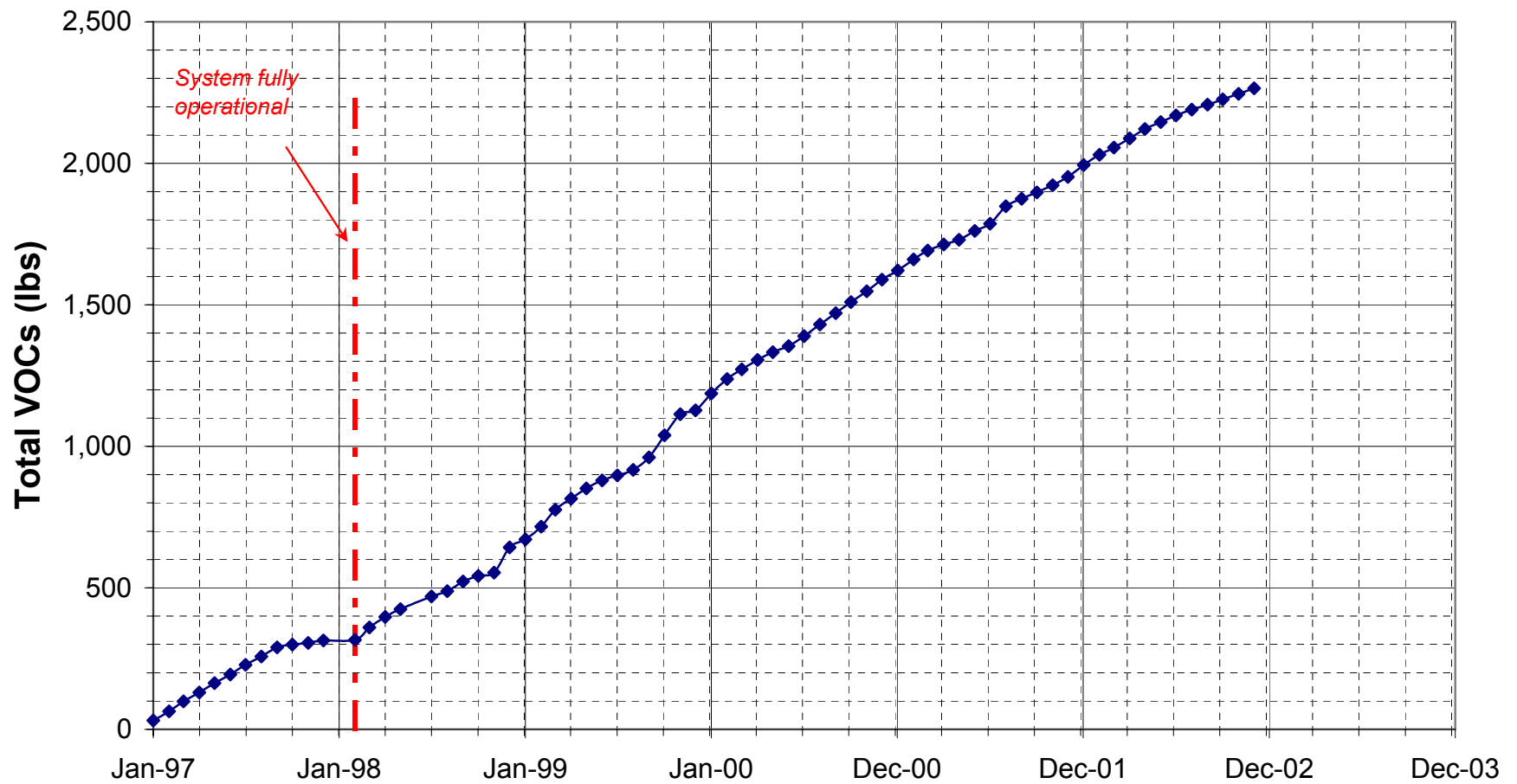


Figure 15
Cumulative VOC Recovery



APPENDIX A

RECOVERY DATA SUMMARIES

Date	Flow Volume	Total VOCs Removed	Cumulative VOC Mass Removed	Cumulative Water Recovered
	(Mgal)	(lb/mo)	(lb)	(gal)
Jan-97	5.58	31.31	31	5,580,000
Feb-97	5.04	32.55	64	10,620,000
Mar-97	5.58	34.77	99	16,200,000
Apr-97	5.40	31.92	131	21,600,000
May-97	5.58	32.99	164	27,180,000
Jun-97	5.40	30.19	194	32,580,000
Jul-97	5.58	34.36	228	38,160,000
Aug-97	5.58	29.06	257	43,740,000
Sep-97	5.40	32.87	290	49,140,000
Oct-97	1.40	9.10	299	50,535,000
Nov-97	1.30	6.38	306	51,831,000
Dec-97	1.79	8.80	314	53,616,600
Feb-98	0.13	1.65	316	53,745,300
Mar-98	3.43	44.12	360	57,180,200
Apr-98	2.88	37.04	397	60,063,900
May-98	2.12	27.85	425	62,187,300
Jul-98	3.91	44.48	469	66,095,600
Aug-98	1.85	18.97	488	67,943,500
Sep-98	3.20	33.68	522	71,145,900
Oct-98	2.25	20.37	542	73,397,300
Nov-98	2.50	11.53	554	75,899,700
Dec-98	1.19	88.58	643	77,087,300
Jan-99	3.01	28.32	671	80,100,000
Feb-99	4.21	44.94	716	84,311,900
Mar-99	3.93	60.32	776	88,240,200
Apr-99	4.08	39.05	815	92,316,500
May-99	3.48	35.93	851	95,800,500
Jun-99	5.23	28.44	880	101,028,500
Jul-99	3.26	17.73	897	104,287,500
Aug-99	3.22	19.55	917	107,506,500
Sep-99	7.30	44.32	961	114,803,500
Oct-99	6.97	78.05	1,039	121,777,500
Nov-99	6.66	74.50	1,114	128,434,500
Dec-99	5.83	13.22	1,127	134,265,500
Jan-00	9.92	60.02	1,187	144,185,500
Feb-00	8.38	50.39	1,237	152,565,500
Mar-00	8.25	34.75	1,272	160,815,500
Apr-00	8.53	33.36	1,305	169,345,500
May-00	5.29	27.53	1,333	174,635,500
Jun-00	4.31	21.19	1,354	178,945,500

Date	Flow Volume	Total VOCs Removed	Cumulative VOC Mass Removed	Cumulative Water Recovered
	(Mgal)	(lb/mo)	(lb)	(gal)
Jul-00	6.75	35.12	1,389	185,694,500
Aug-00	7.38	41.30	1,431	193,074,500
Sep-00	7.56	40.09	1,471	200,634,500
Oct-00	7.25	39.56	1,510	207,888,500
Nov-00	6.91	37.62	1,548	214,801,500
Dec-00	7.60	41.20	1,589	222,396,500
Jan-01	7.30	32.15	1,621	229,696,500
Feb-01	8.00	38.83	1,660	237,696,500
Mar-01	8.40	31.46	1,691	246,096,500
Apr-01	7.30	21.85	1,713	253,396,500
May-01	4.80	16.71	1,730	258,196,500
Jun-01	7.60	31.44	1,762	265,796,500
Jul-01	3.57	25.65	1,787	269,361,500
Aug-01	7.47	60.81	1,848	276,832,500
Sep-01	4.69	27.09	1,875	281,521,779
Oct-01	6.65	22.34	1,897	288,176,525
Nov-01	6.20	24.97	1,922	294,381,071
Dec-01	6.10	29.74	1,952	300,479,022
Jan-02	8.51	41.85	1,994	308,991,022
Feb-02	7.26	35.94	2,030	316,252,022
Mar-02	7.72	25.71	2,056	323,968,022
Apr-02	7.54	32.03	2,088	331,506,022
May-02	7.78	33.50	2,121	339,284,022
Jun-02	6.59	24.55	2,146	345,878,022
Jul-02	6.17	23.51	2,169	352,047,022
Aug-02	5.70	20.65	2,190	357,751,022
Sep-02	6.09	17.27	2,207	363,841,022
Oct-02	6.51	19.17	2,226	370,351,022
Nov-02	6.56	19.37	2,246	376,913,022
Dec-02	6.22	19.69	2,265	383,133,022

APPENDIX B

AIR ANALYSES



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PRELIMINARY REPORT

STL – Houston 6310 Rothway Street Houston, TX. 77045 (713) 690-4444

ANALYTICAL REPORT

JOB NUMBER: 243111

Prepared For:

Cooper Industries
600 Travis
Suite 5800
Houston, TX 77002

Attention: Nelson Olavarria

Date: 12/12/2002

Signature

Name: Agnes V. Vicknair

Title: Project Manager II

E-Mail: avicknair@stl-inc.com

Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

Date: 12/12/2002

Attn.....: Nelson Olavarria

Project Description....: NEC - Harlan, KY.

Page 1

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 243111

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC-HARLAN,KY

ATTN: Nelson Olavarria

Customer Sample ID: 1389
Date Sampled.....: 10/19/2002
Time Sampled.....: 15:42
Sample Matrix.....: Air

Laboratory Sample ID: 243111-1
Date Received.....: 10/23/2002
Time Received.....: 15:28

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics in Air						
	Benzene, Air	ND		1.4	ppbv	11/04/02	gjj
	Bromomethane, Air	ND		1.4	ppbv	11/04/02	gjj
	Carbon Tetrachloride, Air	ND		1.4	ppbv	11/04/02	gjj
	Chlorobenzene, Air	ND		1.4	ppbv	11/04/02	gjj
	Chloroethane, Air	ND		1.4	ppbv	11/04/02	gjj
	Chloroform, Air	ND		1.4	ppbv	11/04/02	gjj
	Chloromethane, Air	ND		1.4	ppbv	11/05/02	gjj
	1,1-Dichloroethane, Air	ND		1.4	ppbv	11/04/02	gjj
	1,2-Dichloroethane, Air	ND		1.4	ppbv	11/04/02	gjj
	1,1-Dichloroethene, Air	ND		1.4	ppbv	11/04/02	gjj
	cis-1,2-Dichloroethene, Air	ND		1.4	ppbv	11/04/02	gjj
	1,2-Dichloropropane, Air	ND		1.4	ppbv	11/04/02	gjj
	Ethylbenzene, Air	ND		1.4	ppbv	11/04/02	gjj
	Methylene Chloride, Air	ND		1.4	ppbv	11/05/02	gjj
	Styrene, Air	ND		1.4	ppbv	11/04/02	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		1.4	ppbv	11/04/02	gjj
	Tetrachloroethene, Air	ND		1.4	ppbv	11/04/02	gjj
	Toluene, Air	ND		1.4	ppbv	11/04/02	gjj
	1,1,1-Trichloroethane, Air	ND		1.4	ppbv	11/04/02	gjj
	1,1,2-Trichloroethane, Air	ND		1.4	ppbv	11/04/02	gjj
	Trichloroethene, Air	ND		1.4	ppbv	11/04/02	gjj
	Vinyl Chloride, Air	ND		1.4	ppbv	11/04/02	gjj
	m,p-Xylene, Air	ND		2.8	ppbv	11/04/02	gjj
	o-Xylene, Air	ND		1.4	ppbv	11/04/02	gjj
	cis-1,3-Dichloropropene, Air	ND		1.4	ppbv	11/04/02	gjj
	trans-1,3-Dichloropropene, Air	ND		1.4	ppbv	11/04/02	gjj
	Acetone, Air	ND		1.4	ppbv	11/04/02	gjj
	Dibromochloromethane, Air	ND		1.4	ppbv	11/04/02	gjj
	Bromodichloromethane, Air	ND		1.4	ppbv	11/05/02	gjj
	Bromoform, Air	ND		1.4	ppbv	11/05/02	gjj
	Carbon Disulfide, Air	ND		1.4	ppbv	11/05/02	gjj
	2-Hexanone, Air	ND		1.4	ppbv	11/04/02	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	ND		2.8	ppbv	11/04/02	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		2.8	ppbv	11/04/02	gjj
	Vinyl Acetate, Air	ND		1.4	ppbv	11/04/02	gjj
	Trichlorotrifluoroethane, Air	ND		1.4	ppbv	11/04/02	gjj

Job Number.: 243111		Q U A L I T Y C O N T R O L R E S U L T S			Report Date.: 12/12/2002	
CUSTOMER: Cooper Industries		PROJECT: NEC-HARLAN,KY			ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	TS042501A			11/04/2002	1824

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Air	ND							
Bromomethane, Air	ND							
Carbon Tetrachloride, Air	ND							
Chlorobenzene, Air	ND							
Chloroethane, Air	ND							
Chloroform, Air	ND							
Chloromethane, Air	ND							
1,1-Dichloroethane, Air	ND							
1,2-Dichloroethane, Air	ND							
1,1-Dichloroethene, Air	ND							
cis-1,2-Dichloroethene, Air	ND							
1,2-Dichloropropane, Air	ND							
Ethylbenzene, Air	ND							
Styrene, Air	ND							
1,1,2,2-Tetrachloroethane, Air	ND							
Tetrachloroethene, Air	ND							
Toluene, Air	ND							
1,1,1-Trichloroethane, Air	ND							
1,1,2-Trichloroethane, Air	ND							
Trichloroethene, Air	ND							
Vinyl Chloride, Air	ND							
m,p-Xylene, Air	ND							
o-Xylene, Air	ND							
cis-1,3-Dichloropropene, Air	ND							
trans-1,3-Dichloropropene, Air	ND							
Acetone, Air	ND							
Dibromochloromethane, Air	ND							
2-Hexanone, Air	ND							
Methyl Ethyl Ketone (2-Butanone), Air	ND							
4-Methyl-2-pentanone (MIBK), Air	ND							
Vinyl Acetate, Air	ND							
Trichlorotrifluoroethane, Air	ND							

MB	Method Blank	TS042501A				11/05/2002	1813	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Chloromethane, Air	ND							
cis-1,2-Dichloroethene, Air	ND							
Methylene Chloride, Air	ND							
Trichloroethene, Air	ND							
Bromodichloromethane, Air	ND							
Bromoform, Air	ND							
Carbon Disulfide, Air	ND							
Trichlorotrifluoroethane, Air	ND							

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 243111

Report Date.: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC-HARLAN,KY

ATTN: Nelson Olavarria

Method.....: Volatile Organics in Air
Batch(s).....: 62214Method Code...: TO-14
Test Matrix...: AirPrep Batch....:
Equipment Code: AIRTOX01

Lab ID	DT	Sample ID	Date	BRFLBE						
243111- 1		1389	11/04/2002	107.1						
243111- 1		1389	11/05/2002	89.9						
622141--21 LCS			11/04/2002	109.1						
622141--21 MB			11/04/2002	101.8						
622142--21 LCS			11/05/2002	97.0						
622142--21 MB			11/05/2002	89.4						

Test	Test Description	Limits
BRFLBE	4-Bromofluorobenzene	71 - 127

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2002

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field, (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol and p-Cresol co-elute. The result of the two is reported as either m&p-cresol or as p-cresol.
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, maybe detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.

Explanation of Qualifiers:

- U - This qualifier indicates that the analyte was analyzed but not detected.
- J - (Organics only) This qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- N - (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

Explanation of General QC Outliers:

- A - Matrix interference present in sample.
- a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
- b - Target analyte was found in the method blank.
- M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
- L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were observed above the RL in the associated samples.
- G - Marginal outlier within 1% of acceptance criteria.
- r - RPD value is outside method acceptance criteria.
- C - Poor RPD values observed due to the non-homogenous nature of the sample.
- O - Sample required dilution due to matrix interference.
- D - Sample reported from a dilution.
- d - Spike and/or surrogate diluted out.
- P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
- E - The reported concentration exceeds the instrument calibration.
- F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
- H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
- W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
- K - High recovery will not affect the quality of reported results.
- Z - See case narrative.

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2002

Explanation of Organic QC Outliers:

- e - Method blank analysis yielded phthalate concentrations above the RL. Phthalates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
- T - Sample analysis yielded poor surrogate recovery.
- R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
- I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
- X - Gaseous compound. In-house QC limits are advisory.
- Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
- f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

- Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
- V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
- e - Serial dilution failed due to matrix interference.
- g - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is greater than or equal to 0.995.
- s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
- l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
- n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.

Abbreviations:

- Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
- CCV - Continuing Calibration Verification
- CRA - Low level standard check - GFAA, Mercury
- CRI - Low level standard check - ICP
- Dil Fac - Dilution Factor - Secondary dilution analysis
- DLFac - Detection Limit Factor
- EB - Extraction Blank (TCLP, SPLP, etc.)
- ICAL - Initial Calibration
- ICB - Initial Calibration Blank
- ICV - Initial Calibration Verification
- ISA - Interference Check Sample A - ICP
- ISB - Interference Check Sample B - ICP
- LCD - Laboratory Control Duplicate
- LCS - Laboratory Control Sample
- MB - Method Blank
- MD - Method Duplicate
- MDL - Method Detection Limit
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- ND - Not Detected

Q U A L I T Y A S S U R A N C E M E T H O D S

R E F E R E N C E S A N D N O T E S

Report Date: 12/12/2002

PB - Preparation Blank
PREPF - Preparation factor
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time

Method References:

- (1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
- (2) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1193; Update IIB, January 1995; Update III, December 1996.
- (3) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989),
- (4) HACH Water Analysis Handbook 3rd Edition (1997).
- (5) Federal Register, July 1, 1990 (40 CFR Part 136).
- (6) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.
- (7) ASTM Annual Book of Methods (Various Years)
- (8) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

L A B O R A T O R Y C H R O N I C L E

Job Number: 243111

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC-HARLAN,KY

ATTN: Nelson Olavarria

Lab ID: 243111-1	Client ID: 1389	Date Recvd: 10/23/2002	Sample Date: 10/19/2002
METHOD	DESCRIPTION	RUN#	BATCH#
	Equipment Rental	1	62210
EPA TO-14A	Volatile Organics in Air	1	62214
EPA TO-14A	Volatile Organics in Air	1	62214

	PREP BT	#(S)	DATE/TIME ANALYZED	DILUTION
			10/23/2002	0000
			11/04/2002	1910
			11/05/2002	1855
				1.40000
				1.40000



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PRELIMINARY REPORT

STL – Houston 6310 Rothway Street Houston, TX. 77045 (713) 690-4444

ANALYTICAL REPORT

JOB NUMBER: 241979

Prepared For:

Cooper Industries
600 Travis
Suite 5800
Houston, TX 77002

Attention: Nelson Olavarria

Date: 12/12/2002

Signature

Name: Agnes V. Vicknair

Title: Project Manager II

E-Mail: avicknair@stl-inc.com

Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

Date: 12/12/2002

Attn.....: Nelson Olavarria

Project Description.....: NEC - Harlan, KY.

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
241979-1	1385 (1385) EFFLUENT	Air	09/27/2002	09:20	10/02/2002	10:41
241979-2	1386 INFLUENT	Air	09/27/2002	09:30	10/02/2002	10:41

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 241979

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC - HARLAN, KY.

ATTN: Nelson Olavarria

Customer Sample ID: 1385 (1385) EFFLUENT

Date Sampled.....: 09/27/2002

Time Sampled.....: 09:20

Sample Matrix.....: Air

Laboratory Sample ID: 241979-1

Date Received.....: 10/02/2002

Time Received.....: 10:41

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics in Air						
	Benzene, Air	6.6		2.9	ppbv	10/08/02	gjj
	Bromomethane, Air	ND		2.9	ppbv	10/08/02	gjj
	Carbon Tetrachloride, Air	ND		2.9	ppbv	10/08/02	gjj
	Chlorobenzene, Air	ND		2.9	ppbv	10/08/02	gjj
	Chloroethane, Air	ND		2.9	ppbv	10/08/02	gjj
	Chloroform, Air	ND		2.9	ppbv	10/08/02	gjj
	Chloromethane, Air	ND		2.9	ppbv	10/08/02	gjj
	1,1-Dichloroethane, Air	ND		2.9	ppbv	10/08/02	gjj
	1,2-Dichloroethane, Air	ND		2.9	ppbv	10/08/02	gjj
	1,1-Dichloroethene, Air	ND		2.9	ppbv	10/08/02	gjj
	cis-1,2-Dichloroethene, Air	57.1		2.9	ppbv	10/08/02	gjj
	1,2-Dichloropropene, Air	ND		2.9	ppbv	10/08/02	gjj
	Ethylbenzene, Air	ND		2.9	ppbv	10/08/02	gjj
	Methylene Chloride, Air	3.1	b	2.9	ppbv	10/08/02	gjj
	Styrene, Air	ND		2.9	ppbv	10/08/02	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		2.9	ppbv	10/08/02	gjj
	Tetrachloroethene, Air	ND		2.9	ppbv	10/08/02	gjj
	Toluene, Air	ND		2.9	ppbv	10/08/02	gjj
	1,1,1-Trichloroethane, Air	ND		2.9	ppbv	10/08/02	gjj
	1,1,2-Trichloroethane, Air	ND		2.9	ppbv	10/08/02	gjj
	Trichloroethene, Air	3.3		2.9	ppbv	10/08/02	gjj
	Vinyl Chloride, Air	ND		2.9	ppbv	10/08/02	gjj
	m,p-Xylene, Air	ND		5.7	ppbv	10/08/02	gjj
	o-Xylene, Air	ND		2.9	ppbv	10/08/02	gjj
	cis-1,3-Dichloropropene, Air	ND		2.9	ppbv	10/08/02	gjj
	trans-1,3-Dichloropropene, Air	ND		2.9	ppbv	10/08/02	gjj
	Acetone, Air	ND		2.9	ppbv	10/04/02	gjj
	Dibromochloromethane, Air	ND		2.9	ppbv	10/08/02	gjj
	Bromodichloromethane, Air	ND		2.9	ppbv	10/08/02	gjj
	Bromoform, Air	ND		2.9	ppbv	10/08/02	gjj
	Carbon Disulfide, Air	ND		2.9	ppbv	10/08/02	gjj
	2-Hexanone, Air	ND		2.9	ppbv	10/04/02	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	ND		5.7	ppbv	10/04/02	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		5.7	ppbv	10/04/02	gjj
	Vinyl Acetate, Air	ND		1.4	ppbv	10/04/02	gjj
	Trichlorotrifluoroethane, Air	ND		2.9	ppbv	10/08/02	gjj

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 241979

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC - HARLAN, KY.

ATTN: Nelson Olavarria

Customer Sample ID: 1386 INFLUENT

Date Sampled.....: 09/27/2002

Time Sampled.....: 09:30

Sample Matrix.....: Air

Laboratory Sample ID: 241979-2

Date Received.....: 10/02/2002

Time Received.....: 10:41

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics in Air						
	Benzene, Air	9.4		1.4	ppbv	10/08/02	gjj
	Bromomethane, Air	ND		1.4	ppbv	10/08/02	gjj
	Carbon Tetrachloride, Air	ND		1.4	ppbv	10/08/02	gjj
	Chlorobenzene, Air	ND		1.4	ppbv	10/08/02	gjj
	Chloroethane, Air	ND		1.4	ppbv	10/08/02	gjj
	Chloroform, Air	ND		1.4	ppbv	10/08/02	gjj
	Chloromethane, Air	ND		1.4	ppbv	10/08/02	gjj
	1,1-Dichloroethane, Air	ND		1.4	ppbv	10/08/02	gjj
	1,2-Dichloroethane, Air	ND		1.4	ppbv	10/08/02	gjj
	1,1-Dichloroethene, Air	4.3		1.4	ppbv	10/08/02	gjj
	cis-1,2-Dichloroethene, Air	2990		280	ppbv	10/08/02	gjj
	1,2-Dichloropropane, Air	ND		1.4	ppbv	10/08/02	gjj
	Ethylbenzene, Air	ND		1.4	ppbv	10/08/02	gjj
	Methylene Chloride, Air	3.7	b	1.4	ppbv	10/08/02	gjj
	Styrene, Air	ND		1.4	ppbv	10/08/02	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		1.4	ppbv	10/08/02	gjj
	Tetrachloroethene, Air	ND		1.4	ppbv	10/08/02	gjj
	Toluene, Air	ND		1.4	ppbv	10/08/02	gjj
	1,1,1-Trichloroethane, Air	ND		1.4	ppbv	10/08/02	gjj
	1,1,2-Trichloroethane, Air	ND		1.4	ppbv	10/08/02	gjj
	Trichloroethene, Air	188		28	ppbv	10/08/02	gjj
	Vinyl Chloride, Air	417		28	ppbv	10/08/02	gjj
	m,p-Xylene, Air	ND		2.8	ppbv	10/08/02	gjj
	o-Xylene, Air	ND		1.4	ppbv	10/08/02	gjj
	cis-1,3-Dichloropropene, Air	ND		1.4	ppbv	10/08/02	gjj
	trans-1,3-Dichloropropene, Air	ND		1.4	ppbv	10/08/02	gjj
	Acetone, Air	3.3		1.4	ppbv	10/04/02	gjj
	Dibromochloromethane, Air	ND		1.4	ppbv	10/08/02	gjj
	Bromodichloromethane, Air	ND		1.4	ppbv	10/08/02	gjj
	Bromoform, Air	ND		1.4	ppbv	10/08/02	gjj
	Carbon Disulfide, Air	ND		1.4	ppbv	10/08/02	gjj
	2-Hexanone, Air	ND		1.4	ppbv	10/04/02	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	ND		2.8	ppbv	10/04/02	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		2.8	ppbv	10/04/02	gjj
	Vinyl Acetate, Air	ND		1.4	ppbv	10/04/02	gjj
	Trichlorotrifluoroethane, Air	ND		1.4	ppbv	10/08/02	gjj

Job Number.: 241979		Q U A L I T Y C O N T R O L R E S U L T S			Report Date.: 12/12/2002	
CUSTOMER: Cooper Industries		PROJECT: NEC - HARLAN, KY.			ATTN: Nelson Olavarria	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: EPA TO-14A Units.....: ppbv Analyst....: gjj
Method Description.: Volatile Organics in Air Batch(s)....: 60268

LCS	Laboratory Control Sample	TS100202A			10/04/2002	1017
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Acetone, Air	12.5387						
2-Hexanone, Air	ND						
4-Methyl-2-pentanone (MIBK), Air	9.54918						
Vinyl Acetate, Air	11.8159						

LCS	Laboratory Control Sample	TS100702A			10/07/2002	2300
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Benzene, Air	10.3777		10		103.8	76-138	
Bromomethane, Air	9.02693		10		90.3	79-127	
Carbon Tetrachloride, Air	9.39524		10		94.0	76-137	
Chlorobenzene, Air	8.87512		10		88.8	78-139	
Chloroethane, Air	9.34647		10		93.5	75-132	
Chloroform, Air	10.0923		10		100.9	77-136	
Chloromethane, Air	8.71776		10		87.2	72-128	
1,1-Dichloroethane, Air	10.1640		10		101.6	66-159	
1,2-Dichloroethane, Air	11.3392		10		113.4	72-149	
1,1-Dichloroethene, Air	9.89632		10		99.0	72-143	
cis-1,2-Dichloroethene, Air	10.2239		10		102.2	78-141	
1,2-Dichloropropane, Air	9.67102		10		96.7	78-135	
Ethylbenzene, Air	8.99770		10		90.0	80-137	
Methylene Chloride, Air	7.70351		10		77.0	75-134	
Styrene, Air	9.46729		10		94.7	40-129	
1,1,2,2-Tetrachloroethane, Air	9.24180		10		92.4	77-138	
Tetrachloroethene, Air	9.12987		10		91.3	77-140	
Toluene, Air	8.74656		10		87.5	78-139	
1,1,1-Trichloroethane, Air	9.84966		10		98.5	74-140	
1,1,2-Trichloroethane, Air	9.53446		10		95.3	79-135	
Trichloroethene, Air	8.95790		10		89.6	78-135	
Vinyl Chloride, Air	8.84594		10		88.5	74-132	
m,p-Xylene, Air	18.4285		20		92.1	73-148	
o-Xylene, Air	9.20159		10		92.0	68-152	
cis-1,3-Dichloropropene, Air	22.1904		10		221.9	53-192	L
trans-1,3-Dichloropropene, Air	10.7316		10		107.3	34-224	
Dibromochloromethane, Air	9.51792						
Bromoform, Air	30.4162						
Carbon Disulfide, Air	10.3172						
Trichlorotrifluoroethane, Air	9.03093		10		90.3	78-143	

MB	Method Blank	TS042501A			10/04/2002	1223
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Acetone, Air	ND						
2-Hexanone, Air	ND						
Methyl Ethyl Ketone (2-Butanone), Air	ND						
4-Methyl-2-pentanone (MIBK), Air	ND						

Job Number.: 241979		Q U A L I T Y C O N T R O L R E S U L T S			Report Date.: 12/12/2002	
CUSTOMER: Cooper Industries		PROJECT: NEC - HARLAN, KY.			ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	TS042501A			10/04/2002	1223

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Vinyl Acetate, Air	ND							

MB	Method Blank	TS042501A				10/08/2002	0102
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Air	ND							
Bromomethane, Air	ND							
Carbon Tetrachloride, Air	ND							
Chlorobenzene, Air	ND							
Chloroethane, Air	ND							
Chloroform, Air	ND							
Chloromethane, Air	ND							
1,1-Dichloroethane, Air	ND							
1,2-Dichloroethane, Air	ND							
1,1-Dichloroethene, Air	ND							
cis-1,2-Dichloroethene, Air	ND							
1,2-Dichloropropane, Air	ND							
Ethylbenzene, Air	ND							
Methylene Chloride, Air	1.39869							b
Styrene, Air	ND							
1,1,2,2-Tetrachloroethane, Air	ND							
Tetrachloroethene, Air	ND							
Toluene, Air	ND							
1,1,1-Trichloroethane, Air	ND							
1,1,2-Trichloroethane, Air	ND							
Trichloroethene, Air	ND							
Vinyl Chloride, Air	ND							
m,p-Xylene, Air	ND							
o-Xylene, Air	ND							
cis-1,3-Dichloropropene, Air	ND							
trans-1,3-Dichloropropene, Air	ND							
Dibromochloromethane, Air	ND							
Bromodichloromethane, Air	ND							
Bromoform, Air	ND							
Carbon Disulfide, Air	ND							
Trichlorotrifluoroethane, Air	ND							

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 241979

Report Date.: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC - HARLAN, KY.

ATTN: Nelson Olavarria

Method.....: Volatile Organics in Air
Batch(s).....: 60268

Method Code...: TO-14
Test Matrix...: Air

Prep Batch....:
Equipment Code: AIRTOX01

Lab ID	DT	Sample ID	Date	BRFLBE
241979- 1		1385 (1385) EFFLUENT	10/04/2002	106.2
241979- 1		1385 (1385) EFFLUENT	10/04/2002	103.6
241979- 1		1385 (1385) EFFLUENT	10/08/2002	111.3
241979- 2		1386 INFLUENT	10/04/2002	98.8
241979- 2		1386 INFLUENT	10/08/2002	100.4
241979- 2		1386 INFLUENT	10/08/2002	99.5
241979- 2		1386 INFLUENT	10/08/2002	102.1
602681--21 LCS			10/04/2002	103.4
602681--21 MB			10/04/2002	92.9
602682--21 LCS			10/07/2002	96.0
602682--21 MB			10/08/2002	97.8

Test	Test Description	Limits
BRFLBE	4-Bromofluorobenzene	71 - 127

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2002

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field, (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol and p-Cresol co-elute. The result of the two is reported as either m&p-cresol or as p-cresol.
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, maybe detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.

Explanation of Qualifiers:

- U - This qualifier indicates that the analyte was analyzed but not detected.
- J - (Organics only) This qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- N - (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

Explanation of General QC Outliers:

- A - Matrix interference present in sample.
- a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
- b - Target analyte was found in the method blank.
- M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
- L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were observed above the RL in the associated samples.
- G - Marginal outlier within 1% of acceptance criteria.
- r - RPD value is outside method acceptance criteria.
- C - Poor RPD values observed due to the non-homogenous nature of the sample.
- O - Sample required dilution due to matrix interference.
- D - Sample reported from a dilution.
- d - Spike and/or surrogate diluted out.
- P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
- E - The reported concentration exceeds the instrument calibration.
- F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
- H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
- W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
- K - High recovery will not affect the quality of reported results.
- Z - See case narrative.

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2002

Explanation of Organic QC Outliers:

- e - Method blank analysis yielded phthalate concentrations above the RL. Phthalates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
- T - Sample analysis yielded poor surrogate recovery.
- R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
- I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
- X - Gaseous compound. In-house QC limits are advisory.
- Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
- f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

- Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
- V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
- e - Serial dilution failed due to matrix interference.
- g - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is greater than or equal to 0.995.
- s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
- l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
- n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.

Abbreviations:

- Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
- CCV - Continuing Calibration Verification
- CRA - Low level standard check - GFAA, Mercury
- CRI - Low level standard check - ICP
- Dil Fac - Dilution Factor - Secondary dilution analysis
- DLFac - Detection Limit Factor
- EB - Extraction Blank (TCLP, SPLP, etc.)
- ICAL - Initial Calibration
- ICB - Initial Calibration Blank
- ICV - Initial Calibration Verification
- ISA - Interference Check Sample A - ICP
- ISB - Interference Check Sample B - ICP
- LCD - Laboratory Control Duplicate
- LCS - Laboratory Control Sample
- MB - Method Blank
- MD - Method Duplicate
- MDL - Method Detection Limit
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- ND - Not Detected

Q U A L I T Y A S S U R A N C E M E T H O D S

R E F E R E N C E S A N D N O T E S

Report Date: 12/12/2002

PB - Preparation Blank
PREPF - Preparation factor
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time

Method References:

- (1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
- (2) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1193; Update IIB, January 1995; Update III, December 1996.
- (3) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989),
- (4) HACH Water Analysis Handbook 3rd Edition (1997).
- (5) Federal Register, July 1, 1990 (40 CFR Part 136).
- (6) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.
- (7) ASTM Annual Book of Methods (Various Years)
- (8) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

L A B O R A T O R Y C H R O N I C L E

Job Number: 241979

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC - HARLAN, KY.

ATTN: Nelson Olavarria

Lab ID: 241979-1	Client ID: 1385 (1385) EFFLUENT	Date Recvd: 10/02/2002	Sample Date: 09/27/2002			
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
	Equipment Rental	1	60280		10/02/2002 0000	
EPA TO-14A	Volatile Organics in Air	1	60268		10/04/2002 1308	1.43000
EPA TO-14A	Volatile Organics in Air	1	60268		10/04/2002 1437	2.86000
EPA TO-14A	Volatile Organics in Air	1	60268		10/08/2002 1505	2.86000
Lab ID: 241979-2	Client ID: 1386 INFLUENT	Date Recvd: 10/02/2002	Sample Date: 09/27/2002			
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
	Equipment Rental	1	60280		10/02/2002 0000	
EPA TO-14A	Volatile Organics in Air	1	60268		10/04/2002 1354	1.40000
EPA TO-14A	Volatile Organics in Air	1	60268		10/08/2002 0859	1.40000
EPA TO-14A	Volatile Organics in Air	1	60268		10/08/2002 1235	28.0000
EPA TO-14A	Volatile Organics in Air	1	60268		10/08/2002 1346	280.000



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PRELIMINARY REPORT

STL – Houston 6310 Rothway Street Houston, TX. 77045 (713) 690-4444

ANALYTICAL REPORT

JOB NUMBER: 240200

Prepared For:

Cooper Industries
600 Travis
Suite 5800
Houston, TX 77002

Attention: Nelson Olavarria

Date: 12/12/2002

Signature

Name: Agnes V. Vicknair

Title: Project Manager II

E-Mail: avicknair@stl-inc.com

Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

Date: 12/12/2002

Attn.....: Nelson Olavarria

Project Description.....: NEC - Harlan, KY.

Page 1

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 240200

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC-HARLAN,KY

ATTN: Nelson Olavarria

Customer Sample ID: 1365
Date Sampled.....: 08/24/2002
Time Sampled.....: 10:05
Sample Matrix.....: Air

Laboratory Sample ID: 240200-1
Date Received.....: 08/28/2002
Time Received.....: 14:59

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics in Air						
	Benzene, Air	2.9		1.4	ppbv	09/04/02	gjj
	Bromomethane, Air	ND		1.4	ppbv	09/04/02	gjj
	Carbon Tetrachloride, Air	ND		1.4	ppbv	09/04/02	gjj
	Chlorobenzene, Air	ND		1.4	ppbv	09/04/02	gjj
	Chloroethane, Air	ND		1.4	ppbv	09/04/02	gjj
	Chloroform, Air	ND		1.4	ppbv	09/04/02	gjj
	Chloromethane, Air	7.7		1.4	ppbv	09/04/02	gjj
	1,1-Dichloroethane, Air	ND		1.4	ppbv	09/04/02	gjj
	1,2-Dichloroethane, Air	ND		1.4	ppbv	09/04/02	gjj
	1,1-Dichloroethene, Air	ND		1.4	ppbv	09/04/02	gjj
	cis-1,2-Dichloroethene, Air	ND		1.4	ppbv	09/04/02	gjj
	1,2-Dichloropropane, Air	ND		1.4	ppbv	09/04/02	gjj
	Ethylbenzene, Air	ND		1.4	ppbv	09/04/02	gjj
	Methylene Chloride, Air	ND		1.4	ppbv	09/04/02	gjj
	Styrene, Air	ND		1.4	ppbv	09/04/02	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		1.4	ppbv	09/04/02	gjj
	Tetrachloroethene, Air	ND		1.4	ppbv	09/04/02	gjj
	Toluene, Air	4.1		1.4	ppbv	09/04/02	gjj
	1,1,1-Trichloroethane, Air	ND		1.4	ppbv	09/04/02	gjj
	1,1,2-Trichloroethane, Air	ND		1.4	ppbv	09/04/02	gjj
	Trichloroethene, Air	ND		1.4	ppbv	09/04/02	gjj
	Vinyl Chloride, Air	ND		1.4	ppbv	09/04/02	gjj
	m,p-Xylene, Air	ND		2.9	ppbv	09/04/02	gjj
	o-Xylene, Air	ND		1.4	ppbv	09/04/02	gjj
	cis-1,3-Dichloropropene, Air	ND		1.4	ppbv	09/04/02	gjj
	trans-1,3-Dichloropropene, Air	ND		1.4	ppbv	09/04/02	gjj
	Acetone, Air	126		7.2	ppbv	09/04/02	gjj
	Dibromochloromethane, Air	ND		1.4	ppbv	09/04/02	gjj
	Bromodichloromethane, Air	ND		1.4	ppbv	09/04/02	gjj
	Bromoform, Air	ND		1.4	ppbv	09/04/02	gjj
	Carbon Disulfide, Air	1.9		1.4	ppbv	09/04/02	gjj
	2-Hexanone, Air	7.0		1.4	ppbv	09/04/02	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	ND		2.9	ppbv	09/04/02	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		2.9	ppbv	09/04/02	gjj
	Vinyl Acetate, Air	ND		1.4	ppbv	09/04/02	gjj
	Trichlorotrifluoroethane, Air	ND		1.4	ppbv	09/04/02	gjj

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 240200

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC-HARLAN,KY

ATTN: Nelson Olavarria

Customer Sample ID: 1366
Date Sampled.....: 08/24/2002
Time Sampled.....: 10:15
Sample Matrix.....: Air

Laboratory Sample ID: 240200-2
Date Received.....: 08/28/2002
Time Received.....: 14:59

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics in Air						
	Benzene, Air	2.6		1.5	ppbv	09/04/02	gjj
	Bromomethane, Air	ND		1.5	ppbv	09/04/02	gjj
	Carbon Tetrachloride, Air	ND		1.5	ppbv	09/04/02	gjj
	Chlorobenzene, Air	ND		1.5	ppbv	09/04/02	gjj
	Chloroethane, Air	ND		1.5	ppbv	09/04/02	gjj
	Chloroform, Air	ND		1.5	ppbv	09/04/02	gjj
	Chloromethane, Air	ND		1.5	ppbv	09/04/02	gjj
	1,1-Dichloroethane, Air	ND		1.5	ppbv	09/04/02	gjj
	1,2-Dichloroethane, Air	ND		1.5	ppbv	09/04/02	gjj
	1,1-Dichloroethene, Air	ND		1.5	ppbv	09/04/02	gjj
	cis-1,2-Dichloroethene, Air	ND		1.5	ppbv	09/04/02	gjj
	1,2-Dichloropropane, Air	ND		1.5	ppbv	09/04/02	gjj
	Ethylbenzene, Air	ND		1.5	ppbv	09/04/02	gjj
	Methylene Chloride, Air	ND		1.5	ppbv	09/04/02	gjj
	Styrene, Air	ND		1.5	ppbv	09/04/02	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		1.5	ppbv	09/04/02	gjj
	Tetrachloroethene, Air	ND		1.5	ppbv	09/04/02	gjj
	Toluene, Air	5.0		1.5	ppbv	09/04/02	gjj
	1,1,1-Trichloroethane, Air	ND		1.5	ppbv	09/04/02	gjj
	1,1,2-Trichloroethane, Air	ND		1.5	ppbv	09/04/02	gjj
	Trichloroethene, Air	ND		1.5	ppbv	09/04/02	gjj
	Vinyl Chloride, Air	ND		1.5	ppbv	09/04/02	gjj
	m,p-Xylene, Air	ND		3.0	ppbv	09/04/02	gjj
	o-Xylene, Air	ND		1.5	ppbv	09/04/02	gjj
	cis-1,3-Dichloropropene, Air	ND		1.5	ppbv	09/04/02	gjj
	trans-1,3-Dichloropropene, Air	ND		1.5	ppbv	09/04/02	gjj
	Acetone, Air	94.9		7.4	ppbv	09/04/02	gjj
	Dibromochloromethane, Air	ND		1.5	ppbv	09/04/02	gjj
	Bromodichloromethane, Air	ND		1.5	ppbv	09/04/02	gjj
	Bromoform, Air	ND		1.5	ppbv	09/04/02	gjj
	Carbon Disulfide, Air	ND		1.5	ppbv	09/04/02	gjj
	2-Hexanone, Air	ND		1.5	ppbv	09/04/02	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	ND		3.0	ppbv	09/04/02	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		3.0	ppbv	09/04/02	gjj
	Vinyl Acetate, Air	ND		1.5	ppbv	09/04/02	gjj
	Trichlorotrifluoroethane, Air	ND		1.5	ppbv	09/04/02	gjj

Job Number.: 240200		Q U A L I T Y C O N T R O L R E S U L T S				Report Date.: 12/12/2002	
CUSTOMER: Cooper Industries		PROJECT: NEC-HARLAN,KY				ATTN: Nelson Olavarria	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
Test Method.....: EPA TO-14A		Units.....: ppbv		Analyst....: gjj			
Method Description.: Volatile Organics in Air		Batch(s)...: 58307					

LCS	Laboratory Control Sample			TS090402A				09/04/2002		1535	
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Air	8.57103		10	ND	85.7		76-138	
Bromomethane, Air	11.5804		10	ND	115.8		79-127	
Carbon Tetrachloride, Air	9.07562		10	ND	90.8		76-137	
Chlorobenzene, Air	9.67168		10	ND	96.7		78-139	
Chloroethane, Air	9.19373		10	ND	91.9		75-132	
Chloroform, Air	8.75415		10	ND	87.5		77-136	
Chloromethane, Air	10.9280		10	ND	109.3		72-128	
1,1-Dichloroethane, Air	8.61542		10	ND	86.2		66-159	
1,2-Dichloroethane, Air	9.02539		10	ND	90.3		72-149	
1,1-Dichloroethene, Air	8.66388		10	ND	86.6		72-143	
cis-1,2-Dichloroethene, Air	8.84054		10	ND	88.4		78-141	
1,2-Dichloropropane, Air	9.21355		10	ND	92.1		78-135	
Ethylbenzene, Air	9.50643		10	ND	95.1		80-137	
Methylene Chloride, Air	9.40162		10	2.52747	94.0		75-134	
Styrene, Air	10.2103		10	ND	102.1		40-129	
1,1,2,2-Tetrachloroethane, Air	9.83834		10	ND	98.4		77-138	
Tetrachloroethene, Air	9.22708		10	ND	92.3		77-140	
Toluene, Air	9.28301		10	ND	92.8		78-139	
1,1,1-Trichloroethane, Air	8.79954		10	ND	88.0		74-140	
1,1,2-Trichloroethane, Air	9.13019		10	ND	91.3		79-135	
Trichloroethene, Air	9.56805		10	ND	95.7		78-135	
Vinyl Chloride, Air	12.2626		10	ND	122.6		74-132	
m,p-Xylene, Air	19.0705		20	ND	95.4		73-148	
o-Xylene, Air	9.83266		10	ND	98.3		68-152	
cis-1,3-Dichloropropene, Air	15.2988		10	ND	153.0		53-192	
trans-1,3-Dichloropropene, Air	8.95455		10	ND	89.5		34-224	
Trichlorotrifluoroethane, Air	8.98957		10	ND	89.9		78-143	

LCS	Laboratory Control Sample			TS090402A				09/06/2002		1032	
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Air	8.62109		10	ND	86.2		76-138	
Bromomethane, Air	11.0870		10	ND	110.9		79-127	
Carbon Tetrachloride, Air	8.27328		10	ND	82.7		76-137	
Chlorobenzene, Air	9.67946		10	ND	96.8		78-139	
Chloroethane, Air	9.12177		10	ND	91.2		75-132	
Chloroform, Air	8.26038		10	ND	82.6		77-136	
Chloromethane, Air	12.5994		10	ND	126.0		72-128	
1,1-Dichloroethane, Air	8.53585		10	ND	85.4		66-159	
1,2-Dichloroethane, Air	7.81538		10	ND	78.2		72-149	
1,1-Dichloroethene, Air	8.92362		10	ND	89.2		72-143	
cis-1,2-Dichloroethene, Air	8.03469		10	ND	80.3		78-141	
1,2-Dichloropropane, Air	8.61979		10	ND	86.2		78-135	
Ethylbenzene, Air	9.48986		10	ND	94.9		80-137	
Methylene Chloride, Air	9.42271		10	0.53366	94.2		75-134	
Styrene, Air	10.1335		10	ND	101.3		40-129	
1,1,2,2-Tetrachloroethane, Air	10.0364		10	ND	100.4		77-138	
Tetrachloroethene, Air	8.68591		10	ND	86.9		77-140	

Job Number.: 240200		Q U A L I T Y C O N T R O L R E S U L T S			Report Date.: 12/12/2002	
CUSTOMER: Cooper Industries		PROJECT: NEC-HARLAN,KY			ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	TS090402A			09/06/2002	1032

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Toluene, Air	9.28346		10	ND	92.8		78-139	
1,1,1-Trichloroethane, Air	8.08631		10	ND	80.9		74-140	
1,1,2-Trichloroethane, Air	8.40127		10	ND	84.0		79-135	
Trichloroethene, Air	8.77237		10	ND	87.7		78-135	
m,p-Xylene, Air	19.2352		20	ND	96.2		73-148	
o-Xylene, Air	9.58680		10	ND	95.9		68-152	
cis-1,3-Dichloropropene, Air	13.2734		10	ND	132.7		53-192	
trans-1,3-Dichloropropene, Air	7.91541		10	ND	79.2		34-224	
Trichlorotrifluoroethane, Air	9.55584		10	ND	95.6		78-143	

MB	Method Blank	TS042501A				09/04/2002	1655
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Air	ND							
Bromomethane, Air	ND							
Carbon Tetrachloride, Air	ND							
Chlorobenzene, Air	ND							
Chloroethane, Air	ND							
Chloroform, Air	ND							
Chloromethane, Air	ND							
1,1-Dichloroethane, Air	ND							
1,2-Dichloroethane, Air	ND							
1,1-Dichloroethene, Air	ND							
cis-1,2-Dichloroethene, Air	ND							
1,2-Dichloropropane, Air	ND							
Ethylbenzene, Air	ND							
Methylene Chloride, Air	2.52747							b
Styrene, Air	ND							
1,1,2,2-Tetrachloroethane, Air	ND							
Tetrachloroethene, Air	ND							
Toluene, Air	ND							
1,1,1-Trichloroethane, Air	ND							
1,1,2-Trichloroethane, Air	ND							
Trichloroethene, Air	ND							
Vinyl Chloride, Air	ND							
m,p-Xylene, Air	ND							
o-Xylene, Air	ND							
cis-1,3-Dichloropropene, Air	ND							
trans-1,3-Dichloropropene, Air	ND							
Acetone, Air	ND							
Dibromochloromethane, Air	ND							
Bromodichloromethane, Air	ND							
Bromoform, Air	ND							
Carbon Disulfide, Air	ND							
2-Hexanone, Air	ND							
Methyl Ethyl Ketone (2-Butanone), Air	ND							
4-Methyl-2-pentanone (MIBK), Air	ND							
Trichlorotrifluoroethane, Air	ND							

Q U A L I T Y C O N T R O L R E S U L T S					
Job Number.: 240200			Report Date.: 12/12/2002		
CUSTOMER: Cooper Industries		PROJECT: NEC-HARLAN,KY		ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MB	Method Blank	TS042501A			09/06/2002 1238
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F
Benzene, Air	ND				
Bromomethane, Air	ND				
Carbon Tetrachloride, Air	ND				
Chlorobenzene, Air	ND				
Chloroethane, Air	ND				
Chloroform, Air	ND				
Chloromethane, Air	ND				
1,1-Dichloroethane, Air	ND				
1,2-Dichloroethane, Air	ND				
1,1-Dichloroethene, Air	ND				
cis-1,2-Dichloroethene, Air	ND				
1,2-Dichloropropane, Air	ND				
Ethylbenzene, Air	ND				
Methylene Chloride, Air	0.53366				
Styrene, Air	ND				
1,1,2,2-Tetrachloroethane, Air	ND				
Tetrachloroethene, Air	ND				
Toluene, Air	ND				
1,1,1-Trichloroethane, Air	ND				
1,1,2-Trichloroethane, Air	ND				
Trichloroethene, Air	ND				
m,p-Xylene, Air	ND				
o-Xylene, Air	ND				
cis-1,3-Dichloropropene, Air	ND				
trans-1,3-Dichloropropene, Air	ND				
Acetone, Air	ND				
Dibromochloromethane, Air	ND				
Bromodichloromethane, Air	ND				
Bromoform, Air	ND				
Carbon Disulfide, Air	ND				
2-Hexanone, Air	ND				
Methyl Ethyl Ketone (2-Butanone), Air	ND				
4-Methyl-2-pentanone (MIBK), Air	ND				
Trichlorotrifluoroethane, Air	ND				

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 240200

Report Date.: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC-HARLAN,KY

ATTN: Nelson Olavarria

Method.....: Volatile Organics in Air

Method Code...: TO-14

Prep Batch....:

Batch(s).....: 58307

Test Matrix...: Air

Equipment Code: AIRTOX01

Lab ID	DT	Sample ID	Date	BRFLBE						
240200- 1		1365	09/04/2002	97.7						
240200- 1		1365	09/04/2002	102.7						
240200- 2		1366	09/04/2002	102.6						
240200- 2		1366	09/04/2002	105.3						
583071--21 LCS			09/04/2002	96.6						
583071--21 MB			09/04/2002	97.5						
583072--21 LCS			09/06/2002	98.5						
583072--21 MB			09/06/2002	97.0						

Test	Test Description	Limits
BRFLBE	4-Bromofluorobenzene	71 - 127

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2002

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field, (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol and p-Cresol co-elute. The result of the two is reported as either m&p-cresol or as p-cresol.
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, maybe detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.

Explanation of Qualifiers:

- U - This qualifier indicates that the analyte was analyzed but not detected.
- J - (Organics only) This qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- N - (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

Explanation of General QC Outliers:

- A - Matrix interference present in sample.
- a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
- b - Target analyte was found in the method blank.
- M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
- L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were observed above the RL in the associated samples.
- G - Marginal outlier within 1% of acceptance criteria.
- r - RPD value is outside method acceptance criteria.
- C - Poor RPD values observed due to the non-homogenous nature of the sample.
- O - Sample required dilution due to matrix interference.
- D - Sample reported from a dilution.
- d - Spike and/or surrogate diluted out.
- P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
- E - The reported concentration exceeds the instrument calibration.
- F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
- H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
- W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
- K - High recovery will not affect the quality of reported results.
- Z - See case narrative.

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2002

Explanation of Organic QC Outliers:

- e - Method blank analysis yielded phthalate concentrations above the RL. Phthalates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
- T - Sample analysis yielded poor surrogate recovery.
- R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
- I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
- X - Gaseous compound. In-house QC limits are advisory.
- Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
- f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

- Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
- V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
- e - Serial dilution failed due to matrix interference.
- g - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is greater than or equal to 0.995.
- s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
- l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
- n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.

Abbreviations:

- Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
- CCV - Continuing Calibration Verification
- CRA - Low level standard check - GFAA, Mercury
- CRI - Low level standard check - ICP
- Dil Fac - Dilution Factor - Secondary dilution analysis
- DLFac - Detection Limit Factor
- EB - Extraction Blank (TCLP, SPLP, etc.)
- ICAL - Initial Calibration
- ICB - Initial Calibration Blank
- ICV - Initial Calibration Verification
- ISA - Interference Check Sample A - ICP
- ISB - Interference Check Sample B - ICP
- LCD - Laboratory Control Duplicate
- LCS - Laboratory Control Sample
- MB - Method Blank
- MD - Method Duplicate
- MDL - Method Detection Limit
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- ND - Not Detected

Q U A L I T Y A S S U R A N C E M E T H O D S

R E F E R E N C E S A N D N O T E S

Report Date: 12/12/2002

PB - Preparation Blank
PREPF - Preparation factor
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time

Method References:

- (1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
- (2) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1193; Update IIB, January 1995; Update III, December 1996.
- (3) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989),
- (4) HACH Water Analysis Handbook 3rd Edition (1997).
- (5) Federal Register, July 1, 1990 (40 CFR Part 136).
- (6) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.
- (7) ASTM Annual Book of Methods (Various Years)
- (8) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

L A B O R A T O R Y C H R O N I C L E

Job Number: 240200

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC-HARLAN,KY

ATTN: Nelson Olavarria

Lab ID: 240200-1	Client ID: 1365	Date Recvd: 08/28/2002	Sample Date: 08/24/2002	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)
	Equipment Rental	1	57939	08/28/2002 0000
EPA TO-14A	Volatile Organics in Air	1	58307	09/04/2002 1820
EPA TO-14A	Volatile Organics in Air	1	58307	09/04/2002 1859
				DILUTION
				1.44000
				7.2000

Lab ID: 240200-2	Client ID: 1366	Date Recvd: 08/28/2002	Sample Date: 08/24/2002	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)
	Equipment Rental	1	57939	08/28/2002 0000
EPA TO-14A	Volatile Organics in Air	1	58307	09/04/2002 1946
EPA TO-14A	Volatile Organics in Air	1	58307	09/04/2002 2025
				DILUTION
				1.48000
				7.4000



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PRELIMINARY REPORT

STL – Houston 6310 Rothway Street Houston, TX. 77045 (713) 690-4444

ANALYTICAL REPORT

JOB NUMBER: 238645

Prepared For:

Cooper Industries
600 Travis
Suite 5800
Houston, TX 77002

Attention: Nelson Olavarria

Date: 12/12/2002

Signature

Name: Agnes V. Vicknair

Title: Project Manager II

E-Mail: avicknair@stl-inc.com

Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

<p style="text-align: center;">S A M P L E I N F O R M A T I O N</p> <p style="text-align: center;">Date: 12/12/2002</p>	
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Project Number.....: 99000671

Customer Project ID....: NEC - HARLAN, KY.

Customer Project ID.....: NEC - Harlan, KY.
Project Description.....: NEC - Harlan, KY.

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
238645-1	1361 EFFLUENT #161	Air	07/24/2002	10:00	07/26/2002	14:54

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 238645

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC - HARLAN, KY.

ATTN: Nelson Olavarria

Customer Sample ID: 1361 EFFLUENT #161

Date Sampled.....: 07/24/2002

Time Sampled.....: 10:00

Sample Matrix.....: Air

Laboratory Sample ID: 238645-1

Date Received.....: 07/26/2002

Time Received.....: 14:54

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics in Air						
	Benzene, Air	ND		1.6	ppbv	07/29/02	gjj
	Bromomethane, Air	ND		1.6	ppbv	07/29/02	gjj
	Carbon Tetrachloride, Air	ND		1.6	ppbv	07/29/02	gjj
	Chlorobenzene, Air	ND		1.6	ppbv	07/29/02	gjj
	Chloroethane, Air	ND		1.6	ppbv	07/29/02	gjj
	Chloroform, Air	ND		1.6	ppbv	07/29/02	gjj
	Chloromethane, Air	ND		1.6	ppbv	07/29/02	gjj
	1,1-Dichloroethane, Air	ND		1.6	ppbv	07/29/02	gjj
	1,2-Dichloroethane, Air	ND		1.6	ppbv	07/29/02	gjj
	1,1-Dichloroethene, Air	ND		1.6	ppbv	07/29/02	gjj
	cis-1,2-Dichloroethene, Air	ND		1.6	ppbv	07/29/02	gjj
	1,2-Dichloropropane, Air	ND		1.6	ppbv	07/29/02	gjj
	Ethylbenzene, Air	ND		1.6	ppbv	07/29/02	gjj
	Methylene Chloride, Air	ND		1.6	ppbv	07/29/02	gjj
	Styrene, Air	ND		1.6	ppbv	07/29/02	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		1.6	ppbv	07/29/02	gjj
	Tetrachloroethene, Air	ND		1.6	ppbv	07/29/02	gjj
	Toluene, Air	ND		1.6	ppbv	07/29/02	gjj
	1,1,1-Trichloroethane, Air	ND		1.6	ppbv	07/29/02	gjj
	1,1,2-Trichloroethane, Air	ND		1.6	ppbv	07/29/02	gjj
	Trichloroethene, Air	ND		1.6	ppbv	07/29/02	gjj
	Vinyl Chloride, Air	ND		1.6	ppbv	07/29/02	gjj
	m,p-Xylene, Air	ND		3.2	ppbv	07/29/02	gjj
	o-Xylene, Air	ND		1.6	ppbv	07/29/02	gjj
	cis-1,3-Dichloropropene, Air	ND		1.6	ppbv	07/29/02	gjj
	trans-1,3-Dichloropropene, Air	ND		1.6	ppbv	07/29/02	gjj
	Acetone, Air	ND		1.6	ppbv	07/29/02	gjj
	Dibromochloromethane, Air	ND		1.6	ppbv	07/29/02	gjj
	Bromodichloromethane, Air	ND		1.6	ppbv	07/29/02	gjj
	Bromoform, Air	ND		1.6	ppbv	07/29/02	gjj
	Carbon Disulfide, Air	ND		1.6	ppbv	07/29/02	gjj
	2-Hexanone, Air	ND		1.6	ppbv	07/29/02	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	ND		3.2	ppbv	07/29/02	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		3.2	ppbv	07/29/02	gjj
	Vinyl Acetate, Air	ND		1.6	ppbv	07/29/02	gjj
	Trichlorotrifluoroethane, Air	ND		1.6	ppbv	07/29/02	gjj

Q U A L I T Y C O N T R O L R E S U L T S					
Job Number.: 238645			Report Date.: 12/12/2002		
CUSTOMER: Cooper Industries		PROJECT: NEC - HARLAN, KY.		ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
LCS	Laboratory Control Sample	TS072902A			07/29/2002 1822

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
1,1,1-Trichloroethane, Air	8.41592		10	ND	84.2		74-140	
1,1,2-Trichloroethane, Air	10.0758		10	ND	100.8		79-135	
Trichloroethene, Air	10.2708		10	ND	102.7		78-135	
Vinyl Chloride, Air	9.94533		10	ND	99.5		74-132	
m,p-Xylene, Air	18.8097		20	ND	94.0		73-148	
o-Xylene, Air	9.60707		10	ND	96.1		68-152	
cis-1,3-Dichloropropene, Air	9.95137		10	ND	99.5		53-192	
trans-1,3-Dichloropropene, Air	9.66106		10	ND	96.6		34-224	
Acetone, Air	9.36966			ND				
Dibromochloromethane, Air	9.42149			ND				
Bromodichloromethane, Air	8.99253			ND				
Bromoform, Air	27.5186			ND				
Carbon Disulfide, Air	9.89882			ND				
Trichlorotrifluoroethane, Air	9.13419		10	ND	91.3		78-143	

LCS	Laboratory Control Sample	TS072902B				07/30/2002 0845
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methylene Chloride, Air	7.85490		10	4.81858	78.5		75-134	

MB	Method Blank	TS042501A				07/26/2002 1833
----	--------------	-----------	--	--	--	-------------------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Air	ND							
Bromomethane, Air	ND							
Carbon Tetrachloride, Air	ND							
Chlorobenzene, Air	ND							
Chloroethane, Air	ND							
Chloroform, Air	ND							
Chloromethane, Air	ND							
1,1-Dichloroethane, Air	ND							
1,2-Dichloroethane, Air	ND							
1,1-Dichloroethene, Air	ND							
cis-1,2-Dichloroethene, Air	ND							
1,2-Dichloropropane, Air	ND							
Ethylbenzene, Air	ND							
Methylene Chloride, Air	2.20389							b
Styrene, Air	ND							
1,1,2,2-Tetrachloroethane, Air	ND							
Tetrachloroethene, Air	ND							
Toluene, Air	ND							
1,1,1-Trichloroethane, Air	ND							
1,1,2-Trichloroethane, Air	ND							
Trichloroethene, Air	ND							
Vinyl Chloride, Air	ND							
m,p-Xylene, Air	ND							
o-Xylene, Air	ND							
cis-1,3-Dichloropropene, Air	ND							
trans-1,3-Dichloropropene, Air	ND							
Trichlorotrifluoroethane, Air	ND							

Job Number.: 238645		Q U A L I T Y C O N T R O L R E S U L T S			Report Date.: 12/12/2002	
CUSTOMER: Cooper Industries		PROJECT: NEC - HARLAN, KY.			ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	TS042501A			07/29/2002	2033

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Benzene, Air	ND						
Bromomethane, Air	ND						
Carbon Tetrachloride, Air	ND						
Chlorobenzene, Air	ND						
Chloroethane, Air	ND						
Chloroform, Air	ND						
Chloromethane, Air	ND						
1,1-Dichloroethane, Air	ND						
1,2-Dichloroethane, Air	ND						
1,1-Dichloroethene, Air	ND						
cis-1,2-Dichloroethene, Air	ND						
1,2-Dichloropropane, Air	ND						
Ethylbenzene, Air	ND						
Methylene Chloride, Air	4.81858						b
Styrene, Air	ND						
1,1,2,2-Tetrachloroethane, Air	ND						
Tetrachloroethene, Air	ND						
Toluene, Air	ND						
1,1,1-Trichloroethane, Air	ND						
1,1,2-Trichloroethane, Air	ND						
Trichloroethene, Air	ND						
Vinyl Chloride, Air	ND						
m,p-Xylene, Air	ND						
o-Xylene, Air	ND						
cis-1,3-Dichloropropene, Air	ND						
trans-1,3-Dichloropropene, Air	ND						
Acetone, Air	ND						
Dibromochloromethane, Air	ND						
Bromodichloromethane, Air	ND						
Bromoform, Air	ND						
Carbon Disulfide, Air	ND						
2-Hexanone, Air	ND						
Methyl Ethyl Ketone (2-Butanone), Air	ND						
4-Methyl-2-pentanone (MIBK), Air	ND						
Vinyl Acetate, Air	ND						
Trichlorotrifluoroethane, Air	ND						

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 238645

Report Date.: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC - HARLAN, KY.

ATTN: Nelson Olavarria

Method.....: Volatile Organics in Air
Batch(s).....: 55804Method Code...: TO-14
Test Matrix...: AirPrep Batch....:
Equipment Code: AIRTOX01

Lab ID	DT	Sample ID	Date	BRFLBE						
238645- 1		1361 EFFLUENT #161	07/29/2002	112.4						
558041--21 LCS			07/26/2002	103.2						
558041--21 MB			07/26/2002	91.2						
558042--21 LCS			07/29/2002	92.4						
558042--21 LCS			07/30/2002	100.0						
558042--21 MB			07/29/2002	92.1						
Test	Test Description		Limits							
BRFLBE	4-Bromofluorobenzene		71 - 127							

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2002

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field, (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol and p-Cresol co-elute. The result of the two is reported as either m&p-cresol or as p-cresol.
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, maybe detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.

Explanation of Qualifiers:

- U - This qualifier indicates that the analyte was analyzed but not detected.
- J - (Organics only) This qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- N - (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

Explanation of General QC Outliers:

- A - Matrix interference present in sample.
- a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
- b - Target analyte was found in the method blank.
- M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
- L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were observed above the RL in the associated samples.
- G - Marginal outlier within 1% of acceptance criteria.
- r - RPD value is outside method acceptance criteria.
- C - Poor RPD values observed due to the non-homogenous nature of the sample.
- O - Sample required dilution due to matrix interference.
- D - Sample reported from a dilution.
- d - Spike and/or surrogate diluted out.
- P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
- E - The reported concentration exceeds the instrument calibration.
- F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
- H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
- W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
- K - High recovery will not affect the quality of reported results.
- Z - See case narrative.

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2002

Explanation of Organic QC Outliers:

- e - Method blank analysis yielded phthalate concentrations above the RL. Phthalates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
- T - Sample analysis yielded poor surrogate recovery.
- R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
- I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
- X - Gaseous compound. In-house QC limits are advisory.
- Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
- f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

- Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
- V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
- e - Serial dilution failed due to matrix interference.
- g - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is greater than or equal to 0.995.
- s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
- l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
- n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.

Abbreviations:

- Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
- CCV - Continuing Calibration Verification
- CRA - Low level standard check - GFAA, Mercury
- CRI - Low level standard check - ICP
- Dil Fac - Dilution Factor - Secondary dilution analysis
- DLFac - Detection Limit Factor
- EB - Extraction Blank (TCLP, SPLP, etc.)
- ICAL - Initial Calibration
- ICB - Initial Calibration Blank
- ICV - Initial Calibration Verification
- ISA - Interference Check Sample A - ICP
- ISB - Interference Check Sample B - ICP
- LCD - Laboratory Control Duplicate
- LCS - Laboratory Control Sample
- MB - Method Blank
- MD - Method Duplicate
- MDL - Method Detection Limit
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- ND - Not Detected

Q U A L I T Y A S S U R A N C E M E T H O D S

R E F E R E N C E S A N D N O T E S

Report Date: 12/12/2002

PB - Preparation Blank
PREPF - Preparation factor
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time

Method References:

- (1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
- (2) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1993; Update IIB, January 1995; Update III, December 1996.
- (3) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989),
- (4) HACH Water Analysis Handbook 3rd Edition (1997).
- (5) Federal Register, July 1, 1990 (40 CFR Part 136).
- (6) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.
- (7) ASTM Annual Book of Methods (Various Years)
- (8) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

L A B O R A T O R Y C H R O N I C L E

Job Number: 238645

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC - HARLAN, KY.

ATTN: Nelson Olavarria

Lab ID: 238645-1	Client ID: 1361 EFFLUENT #161	Date Recvd: 07/26/2002	Sample Date: 07/24/2002
METHOD	DESCRIPTION	RUN# BATCH# PREP BT #(S)	DATE/TIME ANALYZED DILUTION
	Equipment Rental	1 55779	07/26/2002 0000
EPA TO-14A	Volatile Organics in Air	1 55804	07/29/2002 2322 1.60000



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PRELIMINARY REPORT

STL – Houston 6310 Rothway Street Houston, TX. 77045 (713) 690-4444

ANALYTICAL REPORT

JOB NUMBER: 244914

Prepared For:

Cooper Industries
600 Travis
Suite 5800
Houston, TX 77002

Attention: Nelson Olavarria

Date: 12/12/2002

Signature

Name: Agnes V. Vicknair

Title: Project Manager II

E-Mail: avicknair@stl-inc.com

Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: (713) 690-4444

<p style="text-align: center;">S A M P L E I N F O R M A T I O N</p> <p style="text-align: center;">Date: 12/12/2002</p>	
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Project Number.....: 99000671

Customer Project ID....: NEC/COOPER @ HARLAN

Customer Project ID..... NEC/COOPER @ HARLAN
Project Description..... NEC - Harlan, KY.

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
244914-1	EFFLUENT #1390	Air	11/21/2002	13:30	11/25/2002	16:13

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 244914

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC/COOPER @ HARLAN

ATTN: Nelson Olavarria

Customer Sample ID: EFFLUENT #1390
Date Sampled.....: 11/21/2002
Time Sampled.....: 13:30
Sample Matrix.....: Air

Laboratory Sample ID: 244914-1
Date Received.....: 11/25/2002
Time Received.....: 16:13

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics in Air						
	Benzene, Air	ND		1.4	ppbv	12/09/02	gjj
	Bromomethane, Air	ND		1.4	ppbv	12/09/02	gjj
	Carbon Tetrachloride, Air	ND		1.4	ppbv	12/09/02	gjj
	Chlorobenzene, Air	ND		1.4	ppbv	12/09/02	gjj
	Chloroethane, Air	ND		1.4	ppbv	12/09/02	gjj
	Chloroform, Air	ND		1.4	ppbv	12/09/02	gjj
	Chloromethane, Air	ND		1.4	ppbv	12/09/02	gjj
	1,1-Dichloroethane, Air	ND		1.4	ppbv	12/09/02	gjj
	1,2-Dichloroethane, Air	ND		1.4	ppbv	12/09/02	gjj
	1,1-Dichloroethene, Air	ND		1.4	ppbv	12/09/02	gjj
	cis-1,2-Dichloroethene, Air	ND		1.4	ppbv	12/09/02	gjj
	1,2-Dichloropropane, Air	ND		1.4	ppbv	12/09/02	gjj
	Ethylbenzene, Air	ND		1.4	ppbv	12/09/02	gjj
	Methylene Chloride, Air	2.79		1.4	ppbv	12/09/02	gjj
	Styrene, Air	ND		1.4	ppbv	12/09/02	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		1.4	ppbv	12/09/02	gjj
	Tetrachloroethene, Air	ND		1.4	ppbv	12/09/02	gjj
	Toluene, Air	ND		1.4	ppbv	12/09/02	gjj
	1,1,1-Trichloroethane, Air	ND		1.4	ppbv	12/09/02	gjj
	1,1,2-Trichloroethane, Air	ND		1.4	ppbv	12/09/02	gjj
	Trichloroethene, Air	ND		1.4	ppbv	12/09/02	gjj
	Vinyl Chloride, Air	ND		1.4	ppbv	12/09/02	gjj
	m,p-Xylene, Air	ND		2.9	ppbv	12/09/02	gjj
	o-Xylene, Air	ND		1.4	ppbv	12/09/02	gjj
	cis-1,3-Dichloropropene, Air	ND		1.4	ppbv	12/09/02	gjj
	trans-1,3-Dichloropropene, Air	ND		1.4	ppbv	12/09/02	gjj
	Acetone, Air	36.1		1.4	ppbv	12/09/02	gjj
	Dibromochloromethane, Air	ND		1.4	ppbv	12/09/02	gjj
	Bromodichloromethane, Air	ND		1.4	ppbv	12/09/02	gjj
	Bromoform, Air	ND		1.4	ppbv	12/09/02	gjj
	Carbon Disulfide, Air	ND		1.4	ppbv	12/09/02	gjj
	2-Hexanone, Air	ND		1.4	ppbv	12/09/02	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	ND		2.9	ppbv	12/09/02	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		2.9	ppbv	12/09/02	gjj
	Vinyl Acetate, Air	ND		1.4	ppbv	12/09/02	gjj
	Trichlorotrifluoroethane, Air	ND		1.4	ppbv	12/09/02	gjj

Q U A L I T Y C O N T R O L R E S U L T S					
Job Number.: 244914			Report Date.: 12/12/2002		
CUSTOMER: Cooper Industries		PROJECT: NEC/COOPER @ HARLAN		ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MB	Method Blank	TS042501A	64561-1		12/09/2002 1844
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F
cis-1,2-Dichloroethene, Air	ND				
1,2-Dichloropropane, Air	ND				
Ethylbenzene, Air	ND				
Methylene Chloride, Air	ND				
Styrene, Air	ND				
1,1,2,2-Tetrachloroethane, Air	ND				
Tetrachloroethene, Air	ND				
Toluene, Air	ND				
1,1,1-Trichloroethane, Air	ND				
1,1,2-Trichloroethane, Air	ND				
Trichloroethene, Air	ND				
Vinyl Chloride, Air	ND				
m,p-Xylene, Air	ND				
o-Xylene, Air	ND				
cis-1,3-Dichloropropene, Air	ND				
trans-1,3-Dichloropropene, Air	ND				
Acetone, Air	ND				
Dibromochloromethane, Air	ND				
Bromodichloromethane, Air	ND				
Bromoform, Air	ND				
Carbon Disulfide, Air	ND				
2-Hexanone, Air	ND				
Methyl Ethyl Ketone (2-Butanone), Air	ND				
4-Methyl-2-pentanone (MIBK), Air	ND				
Vinyl Acetate, Air	ND				
Trichlorotrifluoroethane, Air	ND				

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 244914

Report Date.: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC/COOPER @ HARLAN

ATTN: Nelson Olavarria

Method.....: Volatile Organics in Air
Batch(s).....: 64561Method Code...: TO-14
Test Matrix...: AirPrep Batch....:
Equipment Code: AIRTOX01

Lab ID	DT	Sample ID	Date	BRFLBE						
64561-	1	LCS	12/09/2002	109.9						
64561-	1	MB	12/09/2002	101.9						
244914-	1	EFFLUENT #1390	12/09/2002	105.7						
Test	Test Description			Limits						
BRFLBE	4-Bromofluorobenzene			71 - 127						

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2002

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field, (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol and p-Cresol co-elute. The result of the two is reported as either m&p-cresol or as p-cresol.
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, maybe detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.

Explanation of Qualifiers:

- U - This qualifier indicates that the analyte was analyzed but not detected.
- J - (Organics only) This qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- N - (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

Explanation of General QC Outliers:

- A - Matrix interference present in sample.
- a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
- b - Target analyte was found in the method blank.
- M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
- L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were observed above the RL in the associated samples.
- G - Marginal outlier within 1% of acceptance criteria.
- r - RPD value is outside method acceptance criteria.
- C - Poor RPD values observed due to the non-homogenous nature of the sample.
- O - Sample required dilution due to matrix interference.
- D - Sample reported from a dilution.
- d - Spike and/or surrogate diluted out.
- P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
- E - The reported concentration exceeds the instrument calibration.
- F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
- H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
- W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
- K - High recovery will not affect the quality of reported results.
- Z - See case narrative.

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2002

Explanation of Organic QC Outliers:

- e - Method blank analysis yielded phthalate concentrations above the RL. Phthalates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
- T - Sample analysis yielded poor surrogate recovery.
- R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
- I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
- X - Gaseous compound. In-house QC limits are advisory.
- Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
- f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

- Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
- V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
- e - Serial dilution failed due to matrix interference.
- g - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is greater than or equal to 0.995.
- s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
- l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
- n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.

Abbreviations:

- Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
- CCV - Continuing Calibration Verification
- CRA - Low level standard check - GFAA, Mercury
- CRI - Low level standard check - ICP
- Dil Fac - Dilution Factor - Secondary dilution analysis
- DLFac - Detection Limit Factor
- EB - Extraction Blank (TCLP, SPLP, etc.)
- ICAL - Initial Calibration
- ICB - Initial Calibration Blank
- ICV - Initial Calibration Verification
- ISA - Interference Check Sample A - ICP
- ISB - Interference Check Sample B - ICP
- LCD - Laboratory Control Duplicate
- LCS - Laboratory Control Sample
- MB - Method Blank
- MD - Method Duplicate
- MDL - Method Detection Limit
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- ND - Not Detected

Q U A L I T Y A S S U R A N C E M E T H O D S

R E F E R E N C E S A N D N O T E S

Report Date: 12/12/2002

PB - Preparation Blank
PREPF - Preparation factor
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time

Method References:

- (1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
- (2) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1193; Update IIB, January 1995; Update III, December 1996.
- (3) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989),
- (4) HACH Water Analysis Handbook 3rd Edition (1997).
- (5) Federal Register, July 1, 1990 (40 CFR Part 136).
- (6) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.
- (7) ASTM Annual Book of Methods (Various Years)
- (8) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

L A B O R A T O R Y C H R O N I C L E

Job Number: 244914

Date: 12/12/2002

CUSTOMER: Cooper Industries

PROJECT: NEC/COOPER @ HARLAN

ATTN: Nelson Olavarria

Lab ID: 244914-1	Client ID: EFFLUENT #1390	Date Recvd: 11/25/2002	Sample Date: 11/21/2002	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)
	Equipment Rental	1	64475	11/25/2002 0000
EPA TO-14A	Volatile Organics in Air	1	64561	12/09/2002 1933 1.44000



STL

LABORATORY TEST RESULTS

Job Number: 246600

Date: 01/11/2003

CUSTOMER: Cooper Industries

PROJECT: NEC - HARRIS, KY

ATTN: Nelson OLiver Jr

Customer Sample ID: #1394 EFFLUENT

Date Sampled.....: 12/20/2002

Time Sampled.....: 14:50

Sample Matrix.....: Air

Laboratory Sample ID: 246600-1

Date Received.....: 12/26/2002

Time Received.....: 16:07

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics in Air						
	Benzene, Air	ND		1.4	ppbv	01/09/03	gjj
	Bromomethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Carbon Tetrachloride, Air	ND		1.4	ppbv	01/09/03	gjj
	Chlorobenzene, Air	ND		1.4	ppbv	01/09/03	gjj
	Chloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Chloroform, Air	ND		1.4	ppbv	01/09/03	gjj
	Chloromethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1-Dichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,2-Dichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1-Dichloroethene, Air	ND		1.4	ppbv	01/09/03	gjj
	cis-1,2-Dichloroethene, Air	ND		1.4	ppbv	01/09/03	gjj
	1,2-Dichloropropane, Air	ND		1.4	ppbv	01/09/03	gjj
	Ethylbenzene, Air	ND		1.4	ppbv	01/09/03	gjj
	Methylene Chloride, Air	ND		1.4	ppbv	01/09/03	gjj
	Styrene, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Tetrachloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Toluene, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1,1-Trichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1,2-Trichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Trichloroethene, Air	ND		1.4	ppbv	01/09/03	gjj
	Vinyl Chloride, Air	ND		1.4	ppbv	01/09/03	gjj
	m,p-Xylene, Air	ND		2.8	ppbv	01/09/03	gjj
	o-Xylene, Air	ND		1.4	ppbv	01/09/03	gjj
	cis-1,3-Dichloropropane, Air	ND		1.4	ppbv	01/09/03	gjj
	trans-1,3-Dichloropropane, Air	ND		1.4	ppbv	01/09/03	gjj
	Acetone, Air	ND		1.4	ppbv	01/09/03	gjj
	Dibromochloromethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Bromodichloromethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Bromoform, Air	ND		1.4	ppbv	01/09/03	gjj
	Carbon Disulfide, Air	ND		1.4	ppbv	01/09/03	gjj
	2-Hexanone, Air	ND		1.4	ppbv	01/09/03	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	ND		2.8	ppbv	01/09/03	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		2.8	ppbv	01/09/03	gjj
	Vinyl Acetate, Air	ND		1.4	ppbv	01/09/03	gjj
	Trichlorotrifluoroethane, Air	ND		1.4	ppbv	01/09/03	gjj



LABORATORY TEST RESULTS

Job Number: 246600

Date: 01/11/2003

CUSTOMER: Cooper Industries

PROJECT: REC HARLAN, KY

ANALYST: Nelson Blaylock

Customer Sample ID: #1395 EFFLUENT

Date Sampled..... 12/20/2002

Time Sampled..... 16:35

Sample Matrix..... Air

Laboratory Sample ID: 246600-2

Date Received..... 12/26/2002

Time Received..... 16:07

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	CLASS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics in Air						
	Benzene, Air	ND		1.5	ppbv	01/09/03	gjj
	Bromomethane, Air	ND		1.5	ppbv	01/09/03	gjj
	Carbon Tetrachloride, Air	ND		1.5	ppbv	01/09/03	gjj
	Chlorobenzene, Air	ND		1.5	ppbv	01/09/03	gjj
	Chloroethane, Air	ND		1.5	ppbv	01/09/03	gjj
	Chloroform, Air	ND		1.5	ppbv	01/09/03	gjj
	Chloromethane, Air	ND		1.5	ppbv	01/09/03	gjj
	1,1-Dichloroethane, Air	ND		1.5	ppbv	01/09/03	gjj
	1,2-Dichloroethane, Air	ND		1.5	ppbv	01/09/03	gjj
	1,1-Dichloroethene, Air	ND		1.5	ppbv	01/09/03	gjj
	cis-1,2-Dichloroethene, Air	ND		1.5	ppbv	01/09/03	gjj
	1,2-Dichloropropane, Air	ND		1.5	ppbv	01/09/03	gjj
	Ethylbenzene, Air	ND		1.5	ppbv	01/09/03	gjj
	Methylene Chloride, Air	ND		1.5	ppbv	01/09/03	gjj
	Styrene, Air	ND		1.5	ppbv	01/09/03	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		1.5	ppbv	01/09/03	gjj
	Tetrachloroethene, Air	ND		1.5	ppbv	01/09/03	gjj
	Toluene, Air	ND		1.5	ppbv	01/09/03	gjj
	1,1,1-Trichloroethane, Air	ND		1.5	ppbv	01/09/03	gjj
	1,1,2-Trichloroethane, Air	ND		1.5	ppbv	01/09/03	gjj
	Trichloroethene, Air	ND		1.5	ppbv	01/09/03	gjj
	Vinyl Chloride, Air	ND		1.5	ppbv	01/09/03	gjj
	m,p-Xylene, Air	ND		3.0	ppbv	01/09/03	gjj
	o-Xylene, Air	ND		1.5	ppbv	01/09/03	gjj
	cis-1,3-Dichloropropene, Air	ND		1.5	ppbv	01/09/03	gjj
	trans-1,3-Dichloropropene, Air	ND		1.5	ppbv	01/09/03	gjj
	Acetone, Air	ND		1.5	ppbv	01/09/03	gjj
	Dibromochloromethane, Air	ND		1.5	ppbv	01/09/03	gjj
	Bromodichloromethane, Air	ND		1.5	ppbv	01/09/03	gjj
	Bromoform, Air	ND		1.5	ppbv	01/09/03	gjj
	Carbon Disulfide, Air	ND		1.5	ppbv	01/09/03	gjj
	2-Hexanone, Air	ND		1.5	ppbv	01/09/03	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	ND		3.0	ppbv	01/09/03	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		3.0	ppbv	01/09/03	gjj
	Vinyl Acetate, Air	ND		1.5	ppbv	01/09/03	gjj
	Trichlorotrifluoroethane, Air	ND		1.5	ppbv	01/09/03	gjj



LABORATORY TEST RESULTS

Job Number: 246600

Date: 01/11/2003

CUSTOMER: Cooper Industries

PROJECT: NEC HANLAN, KY

ANALYST: Nelson Graybill

Customer Sample ID: #1306 EFFLUENT

Date Sampled: 12/20/2002

Time Sampled: 14:53

Sample Matrix: Air

Influent

Laboratory Sample ID: 246600-3

Date Received: 12/26/2002

Time Received: 16:07

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics fr Air						
	Benzene, Air	2.09		1.4	ppbv	01/09/03	gjj
	Bromomethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Carbon Tetrachloride, Air	ND		1.4	ppbv	01/09/03	gjj
	Chlorobenzene, Air	ND		1.4	ppbv	01/09/03	gjj
	Chloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Chloroform, Air	ND		1.4	ppbv	01/09/03	gjj
	Chloromethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1-Dichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,2-Dichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1-Dichloroethene, Air	ND		1.4	ppbv	01/09/03	gjj
	cis-1,2-Dichloroethene, Air	38.2		1.4	ppbv	01/09/03	gjj
	1,2-Dichloropropane, Air	ND		1.4	ppbv	01/09/03	gjj
	Ethylbenzene, Air	2.29		1.4	ppbv	01/09/03	gjj
	Methylene Chloride, Air	4.70		1.4	ppbv	01/09/03	gjj
	Styrene, Air	1.44		1.4	ppbv	01/09/03	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Tetrachloroethene, Air	ND		1.4	ppbv	01/09/03	gjj
	Toluene, Air	26.2		1.4	ppbv	01/09/03	gjj
	1,1,1-Trichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1,2-Trichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Trichloroethene, Air	7.48		1.4	ppbv	01/09/03	gjj
	Vinyl Chloride, Air	4.62		1.4	ppbv	01/09/03	gjj
	m,p-Xylene, Air	5.77		2.8	ppbv	01/09/03	gjj
	o-Xylene, Air	1.91		1.4	ppbv	01/09/03	gjj
	cis-1,3-Dichloropropene, Air	ND		1.4	ppbv	01/09/03	gjj
	trans-1,3-Dichloropropene, Air	ND		1.4	ppbv	01/09/03	gjj
	Acetone, Air	48.2		1.4	ppbv	01/09/03	gjj
	Dibromochloromethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Bromodichloromethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Bromoform, Air	ND		1.4	ppbv	01/09/03	gjj
	Carbon Disulfide, Air	ND		1.4	ppbv	01/09/03	gjj
	2-Hexanone, Air	ND		1.4	ppbv	01/09/03	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	30.8		2.8	ppbv	01/09/03	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		2.8	ppbv	01/09/03	gjj
	Vinyl Acetate, Air	ND		1.4	ppbv	01/09/03	gjj
	Trichlorotrifluoroethane, Air	ND		1.4	ppbv	01/09/03	gjj



LABORATORY TEST RESULTS

Job Number: 246600

Date: 01/11/2003

CUSTOMER: Cooper Industries

PROJECT: REC - MARLAN CY

JCT: Melach Olvan To

Customer Sample ID: #1397 EFFLUENT
 Date Sampled.....: 12/20/2002
 Time Sampled.....: 14:38
 Sample Matrix.....: Air

Influent

Laboratory Sample ID: 246600-4
 Date Received.....: 12/26/2002
 Time Received.....: 16:07

TEST METHOD	PARAMETER / TEST DESCRIPTION	SAMPLE RESULT	FLAGS	REPORTING LIMIT	UNITS	DATE	TECH
EPA TO-14A	Volatile Organics in Air						
	Benzene, Air	1.91		1.4	ppbv	01/09/03	gjj
	Bromomethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Carbon Tetrachloride, Air	ND		1.4	ppbv	01/09/03	gjj
	Chlorobenzene, Air	ND		1.4	ppbv	01/09/03	gjj
	Chloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Chloroform, Air	ND		1.4	ppbv	01/09/03	gjj
	Chloromethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1-Dichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,2-Dichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1-Dichloroethene, Air	ND		1.4	ppbv	01/09/03	gjj
	cis-1,2-Dichloroethane, Air	1550		69	ppbv	01/10/03	gjj
	1,2-Dichloropropane, Air	ND		1.4	ppbv	01/09/03	gjj
	Ethylbenzene, Air	ND		1.4	ppbv	01/09/03	gjj
	Methylene Chloride, Air	3.75		1.4	ppbv	01/09/03	gjj
	Styrene, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1,2,2-Tetrachloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Tetrachloroethene, Air	ND		1.4	ppbv	01/09/03	gjj
	Toluene, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1,1-Trichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	1,1,2-Trichloroethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Trichloroethene, Air	22.5		1.4	ppbv	01/09/03	gjj
	Vinyl Chloride, Air	205		28	ppbv	01/10/03	gjj
	m,p-Xylene, Air	ND		2.8	ppbv	01/09/03	gjj
	o-Xylene, Air	ND		1.4	ppbv	01/09/03	gjj
	cis-1,3-Dichloropropene, Air	9.34		1.4	ppbv	01/09/03	gjj
	trans-1,3-Dichloropropene, Air	ND		1.4	ppbv	01/09/03	gjj
	Acetone, Air	89.6		28	ppbv	01/10/03	gjj
	Dibromochloromethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Bromodichloromethane, Air	ND		1.4	ppbv	01/09/03	gjj
	Bromoform, Air	ND		1.4	ppbv	01/09/03	gjj
	Carbon Disulfide, Air	21.0		1.4	ppbv	01/09/03	gjj
	2-Hexanone, Air	ND		1.4	ppbv	01/09/03	gjj
	Methyl Ethyl Ketone (2-Butanone), Air	ND		2.8	ppbv	01/09/03	gjj
	4-Methyl-2-pentanone (MIBK), Air	ND		2.8	ppbv	01/09/03	gjj
	Vinyl Acetate, Air	ND		1.4	ppbv	01/09/03	gjj
	Trichlorotrifluoroethane, Air	ND		1.4	ppbv	01/09/03	gjj

APPENDIX C

HISTORIC CAT-OX INFLUENT AIR ANALYTICAL RESULTS

Table C-1
Summary of Historic Cat-OX Influent Results
Harlan Treatment System

Sample Date	Influent Concentrations (ppbv)		
	1,2-Dichlorethene	Trichloroethene	Vinyl Chloride
5/13/1998	2824	1404	39
6/3/1998	<1	<1	<1
7/1/1998	<1	<1	<1
8/4/1998	<1	<1	<1
9/3/1998	799	369	44
10/7/1998	1991	820	107
11/4/1998	24	11	<1
12/10/1998	1701	621	94
1/8/1999	3182	945	203
5/10/1999	1720	639	133
6/8/1999	1340	437	141
10/21/1999	1430	362	125
12/14/1999	830	72	143
1/6/2000	1580	272	167
4/5/2000	675	100	100
7/5/2000	38	6	4
10/25/2000	1070	456	32
2/8/2001	2150	410	108
3/7/2001	2160	720	105
4/10/2001	1030	23	138
5/14/2001	1020	31	236
6/19/2001	3920	472	233
10/3/2001	740	13.2	169
11/5/2001	1810	250	182
12/12/2001	2260	790	266
1/29/2002	6.57	155	146
2/19/2002	560	266	193
3/14/2002	2420	263	219
5/7/2002	3980	213	40.4
6/26/2002	20.6	<2.8	<2.8
9/27/2002	2990	188	417
12/20/2002	1550	22.5	205

Notes:

1,2-Dichlorethene effluent action level - 5,850,000 ppbv
Trichloroethene effluent action level - 19,600 ppbv
Vinyl Chloride effluent action level - 837 ppbv
Historic Data from LAWGIBB Groub report - October 2001

APPENDIX D

CAT-OX INFLUENT AIR CONCENTRATIONS THROUGH TIME

Figure D-2
Cat-Ox Influent versus Time
Trichloroethene

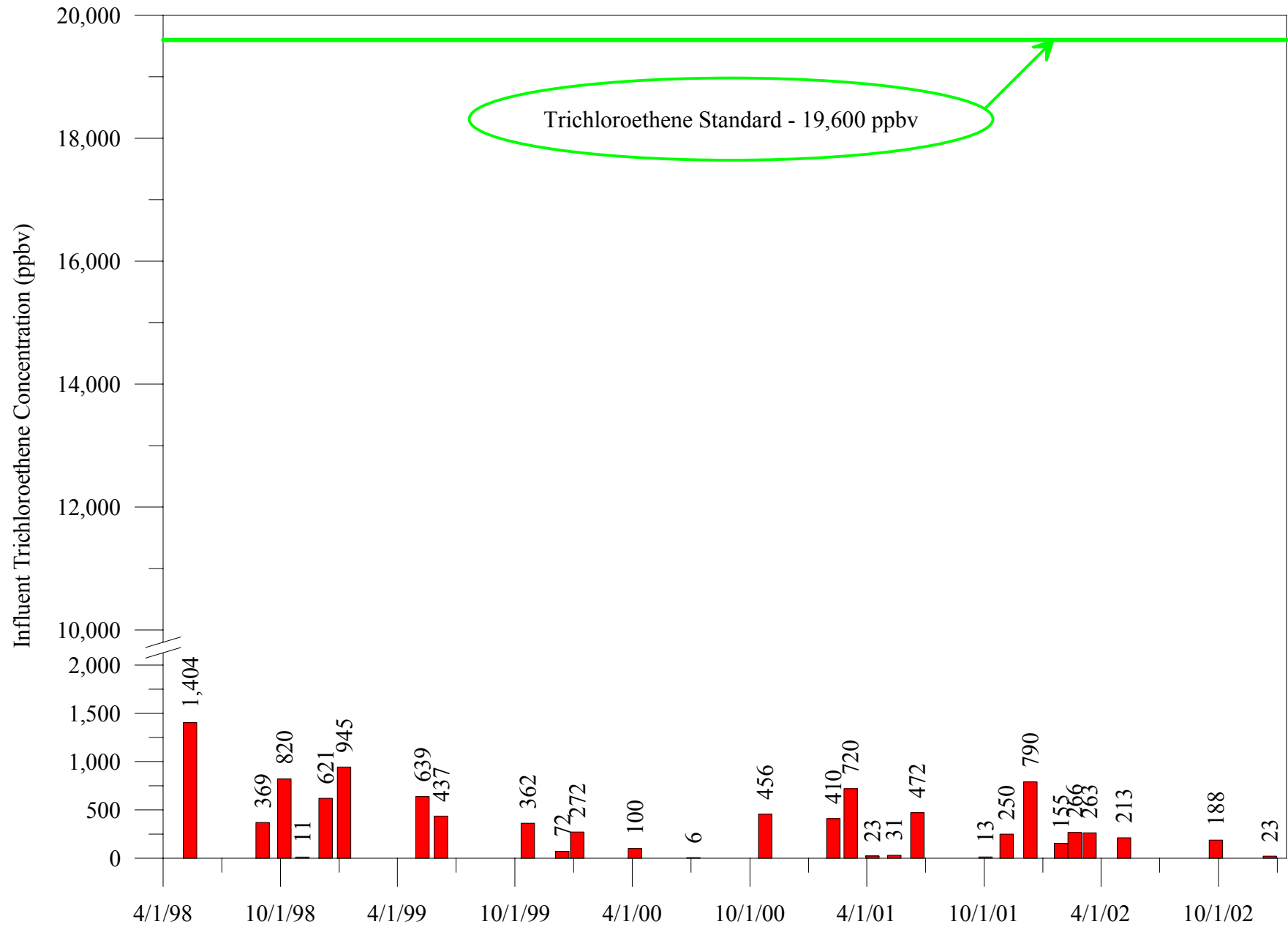


Figure D-1
Cat-Ox Influent versus Time
1,2-Dichloroethene

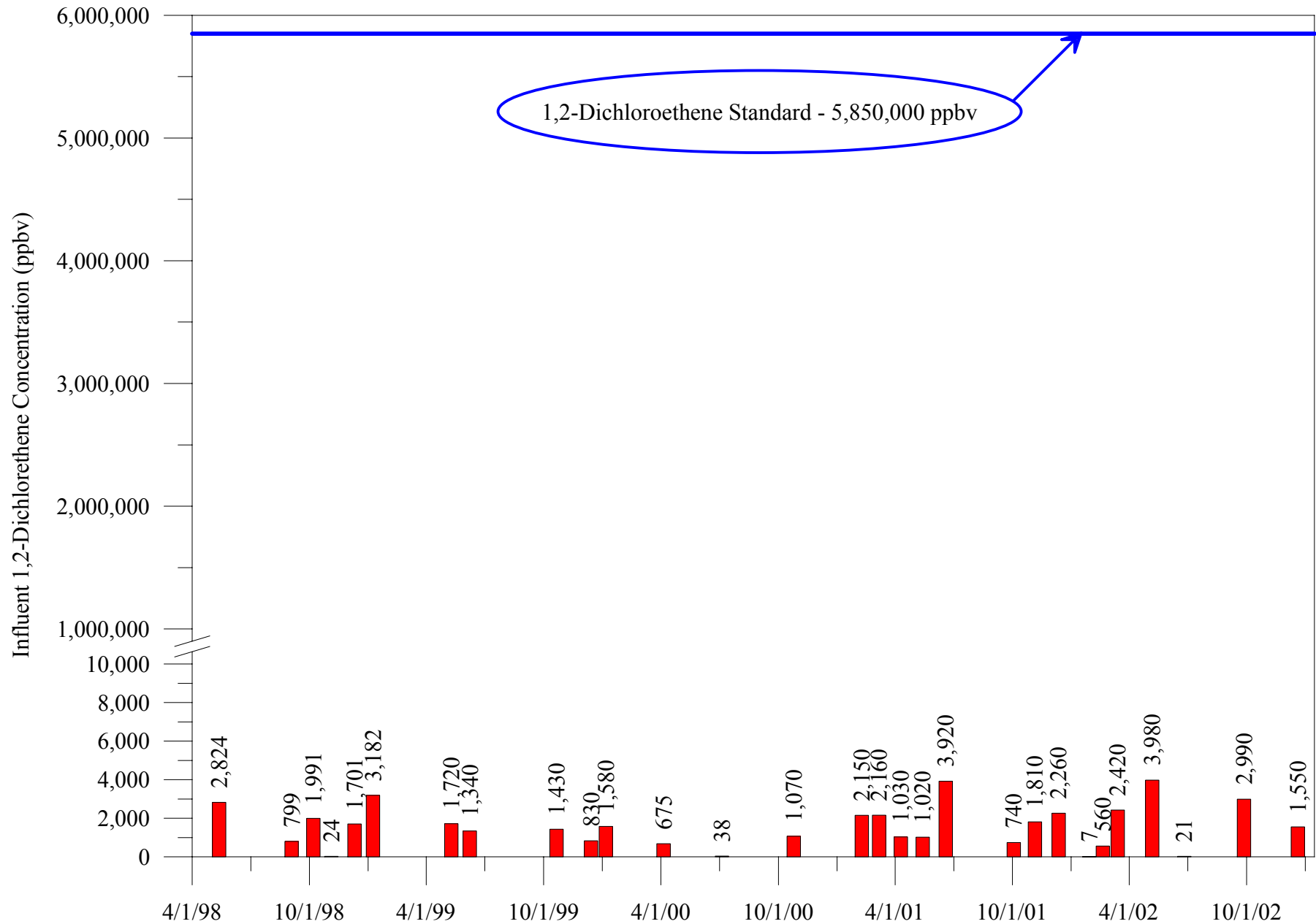
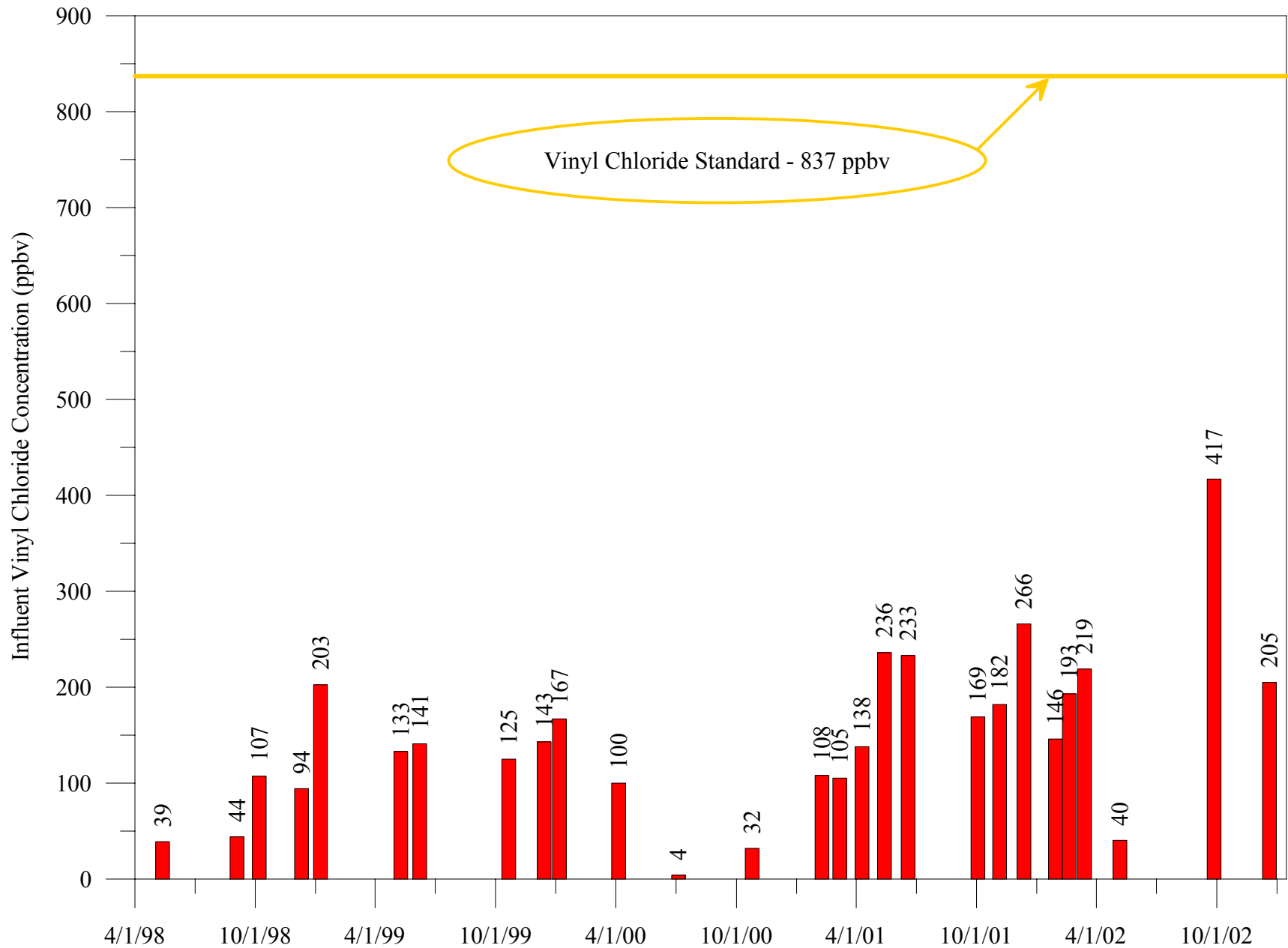


Figure D-3
Cat-Ox Influent versus Time
Vinyl Chloride



APPENDIX E

SECOND SEMI-ANNUAL 2002 LABORATORY REPORT

October 15, 2002

Mr. Nelson Olavarria
Cooper Industries
600 Travis
Suite 5800
Houston, TX 77002

Dear Mr. Olavarria:

Enclosed are analytical results for samples submitted to Pace Analytical by Cooper Industries. The samples were received on September 30, 2002. Please reference Pace project number 02-4047 when inquiring about this report.

Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Pace Sample Identification	Client Sample Identification
0209-1946	MW-13
0209-1947	MW-12
0209-1948	MW-12-16
0209-1949	MW-5-2
0209-1950	MW-9
0209-1951	R-2
0209-1952	MW-5-2A
0209-1953	MW-5-11

Pace Sample Identification	Client Sample Identification
0209-1954	MW-7
0209-1955	SUMP/TRENCH
0209-1956	FIELD BLANK
0209-1957	MW-5-10
0209-1958	MW-6
0209-1959	EQUIPMENT BLANK
0209-1960	BLIND DUP

General Comments: Ice was present upon receipt.

Please call me if you have any questions regarding the information contained within this report.

Sincerely,



Raelyn E. Sylvester
Project Manager

REC: jld

Enclosures

cc: Larry Drane, Civil & Environmental Consultants, Inc.

OCT 29 2002

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Mr. Nelson Olavarria
Cooper Industries
600 Travis
Suite 5800
Houston, TX 77002

Lab Project ID: 02-4047
Lab Sample ID: 0209-1946
Client Sample ID: MW-13
Sample Matrix: Aqueous

Date Sampled: 09/25/2002
Date Received: 09/30/2002

Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016075-1	10 U
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016075-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016075-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016075-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016075-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U

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Lab Sample ID: 0209-1946
Client Sample ID: MW-13

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016075-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016075-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Lab Project ID: 02-4047
Lab Sample ID: 0209-1947
Client Sample ID: MW-12
Sample Matrix: Aqueous

Date Sampled: 09/25/2002
Date Received: 09/30/2002

Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	93	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

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Lab Sample ID: 0209-1947

Client Sample ID: MW-12

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	5.7	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Lab Project ID: 02-4047
Lab Sample ID: 0209-1948
Client Sample ID: MW-12-16
Sample Matrix: Aqueous

Date Sampled: 09/25/2002
Date Received: 09/30/2002

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

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Lab Sample ID: 0209-1948

Client Sample ID: MW-12-16

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	1.2 J	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Lab Project ID: 02-4047
Lab Sample ID: 0209-1949
Client Sample ID: MW-5-2
Sample Matrix: Aqueous

Date Sampled: 09/25/2002

Date Received: 09/30/2002

Client Site: Harlan, KY

Client Ref.: Cooper (Quarterly)

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	8.2	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.6	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	1100 D	250	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.6	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

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Lab Sample ID: 0209-1949
Client Sample ID: MW-5-2

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	40	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	22	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Lab Project ID: 02-4047
Lab Sample ID: 0209-1950
Client Sample ID: MW-9
Sample Matrix: Aqueous

Date Sampled: 09/25/2002

Date Received: 09/30/2002

Client Site: Harlan, KY

Client Ref.: Cooper (Quarterly)

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	15	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

(Continued)

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Lab Sample ID: 0209-1950
Client Sample ID: MW-9

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	1.7 J	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Lab Project ID: 02-4047
Lab Sample ID: 0209-1951
Client Sample ID: R-2
Sample Matrix: Aqueous

Date Sampled: 09/25/2002
Date Received: 09/30/2002

Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	3.0	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	1200 D	250	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	6.4	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

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Lab Sample ID: 0209-1951
Client Sample ID: R-2

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	130	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	35	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Lab Project ID: 02-4047
Lab Sample ID: 0209-1952
Client Sample ID: MW-5-2A
Sample Matrix: Aqueous

Date Sampled: 09/25/2002

Date Received: 09/30/2002

Client Site: Harlan, KY

Client Ref.: Cooper (Quarterly)

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	1.6 J	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	700 D	50	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	3.4 J	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

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Lab Sample ID: 0209-1952

Client Sample ID: MW-5-2A

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	85	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	25	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Lab Project ID: 02-4047
Lab Sample ID: 0209-1953
Client Sample ID: MW-5-11
Sample Matrix: Aqueous

Date Sampled: 09/25/2002
Date Received: 09/30/2002

Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	3.0 J	10	ug/l	MAK	10/08/2002	0016088-1	10 U
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/08/2002	0016088-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	260 D	25	ug/l	MAK	10/08/2002	0016088-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U

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Lab Sample ID: 0209-1953
Client Sample ID: MW-5-11

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	22	2.0	ug/l	MAK	10/08/2002	0016088-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Lab Project ID: 02-4047
Lab Sample ID: 0209-1954
Client Sample ID: MWV-7
Sample Matrix: Aqueous

Date Sampled: 09/25/2002
Date Received: 09/30/2002

Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	1.2 J	2.0	ug/l	MAK	10/08/2002	0016088-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	610 D	50	ug/l	MAK	10/08/2002	0016088-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U

(Continued)

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Lab Sample ID: 0209-1954
Client Sample ID: MW-7

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	23	2.0	ug/l	MAK	10/08/2002	0016088-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Nelson Olavarria
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600 Travis
Suite 5800
Houston, TX 77002

Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Lab Project ID: 02-4047
Lab Sample ID: 0209-1955
Client Sample ID: SUMP/TRENCH
Sample Matrix: Aqueous

Date Sampled: 09/25/2002
Date Received: 09/30/2002

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/08/2002	0016088-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	69	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/08/2002	0016088-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	3.1 J	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U

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Lab Sample ID: 0209-1955
Client Sample ID: SUMP/TRENCH

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	1300 D	130	ug/l	MAK	10/08/2002	0016088-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/08/2002	0016088-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/08/2002	0016088-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Nelson Olavarria
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Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Lab Project ID: 02-4047
Lab Sample ID: 0209-1956
Client Sample ID: FIELD BLANK
Sample Matrix: Aqueous

Date Sampled: 09/25/2002
Date Received: 09/30/2002

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	29	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

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Lab Sample ID: 0209-1956
Client Sample ID: FIELD BLANK

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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600 Travis
Suite 5800
Houston, TX 77002

Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Lab Project ID: 02-4047
Lab Sample ID: 0209-1957
Client Sample ID: MW-5-10
Sample Matrix: Aqueous

Date Sampled: 09/25/2002
Date Received: 09/30/2002

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	11	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

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Lab Sample ID: 0209-1957
Client Sample ID: MW-5-10

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Lab Project ID: 02-4047
Lab Sample ID: 0209-1958
Client Sample ID: MW-6
Sample Matrix: Aqueous

Date Sampled: 09/26/2002
Date Received: 09/30/2002

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

(Continued)

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Lab Sample ID: 0209-1958
Client Sample ID: MW-6

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Nelson Olavarria
Cooper Industries
600 Travis
Suite 5800
Houston, TX 77002

Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Lab Project ID: 02-4047
Lab Sample ID: 0209-1959
Client Sample ID: EQUIPMENT BLANK
Sample Matrix: Aqueous

Date Sampled: 09/26/2002
Date Received: 09/30/2002

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	31	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

(Continued)

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Lab Sample ID: 0209-1959
Client Sample ID: EQUIPMENT BLANK

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	2.0 U	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Nelson Olavarria
Cooper Industries
600 Travis
Suite 5800
Houston, TX 77002

Client Site: Harlan, KY
Client Ref.: Cooper (Quarterly)

Lab Project ID: 02-4047
Lab Sample ID: 0209-1960
Client Sample ID: BLIND DUP
Sample Matrix: Aqueous

Date Sampled: 09/25/2002
Date Received: 09/30/2002

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Acetone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	4.5 J
Benzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromodichloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromoform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Bromomethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Butanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Carbon Disulfide	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Carbon Tetrachloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chlorobenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloroform	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Chloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Dibromochloromethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1-Dichloroethene	8260B ⁽¹⁾	1.2 J	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
cis-1,2-Dichloroethene	8260B ⁽¹⁾	520 D	50	ug/l	MAK	10/08/2002	0016088-1	5.0 U
trans-1,2-Dichloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,2-Dichloropropane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
cis-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
trans-1,3-Dichloropropene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Ethylbenzene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
2-Hexanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
4-Methyl-2-pentanone	8260B ⁽¹⁾	10 U	10	ug/l	MAK	10/07/2002	0016086-1	10 U
Methylene chloride	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Styrene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,2,2-Tetrachloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Tetrachloroethene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Toluene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
1,1,1-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

(Continued)

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Lab Sample ID: 0209-1960
Client Sample ID: BLIND DUP

Volatiles (Cont.)

1,1,2-Trichloroethane	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Trichloroethene	8260B ⁽¹⁾	2.5 J	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
Vinyl chloride	8260B ⁽¹⁾	23	2.0	ug/l	MAK	10/07/2002	0016086-1	2.0 U
m,p-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U
o-Xylene	8260B ⁽¹⁾	5.0 U	5.0	ug/l	MAK	10/07/2002	0016086-1	5.0 U

⁽¹⁾ U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Section A

Section B

690045

Section C

Required Client Information:

Section A

Report To: Nelson Olavarria

Section B

Page: 1 of 2

To Be Completed by Pace Analytical and Client

Section C

Company: COOPER INDUSTRIES

Address: COOPER IND

Copy To: LARRY DANE (CEC)

Project Name: NEC/HARRIAN, KY

Client Information (Check quote/contract):

Quote Reference:

Project Manager:

Project #:

Profile #:

Requested Analysis:

Project #:

Profile #:

Requested Analysis:

Project #:

Phone:

Fax:

Project Number:

Requested Analysis:

Requested Analysis:

Project #:

Section D Required Client Information:

SAMPLE ID

One character per box.
(A-Z, 0-9, /, -)

Sample IDs MUST BE UNIQUE

ITEM #	Section D	Required Client Information:	Valid Matrix Codes	MATRIX CODE	DATE COLLECTED	TIME COLLECTED	# Containers	Preservatives	Remarks / Lab ID
1	MW-13		WATER	WT	09/25/02 11:35	3	X	Unpreserved	09-1946
2	MW-12		WATER	WT	09/25/02 11:59	3	X	Unpreserved	1947
3	MW-13-16		WATER	WT	09/25/02 14:00	3	X	Unpreserved	1948
4	MW-5-2		WATER	WT	09/25/02 14:50	3	X	Unpreserved	1949
5	MW-9		WATER	WT	09/25/02 16:25	3	X	Unpreserved	1950
6	R-2		WATER	WT	09/25/02 17:00	3	X	Unpreserved	1951
7	MW-5-2A		WATER	WT	09/25/02 17:08	3	X	Unpreserved	1952
8	MW-5-11		WATER	WT	09/25/02 17:15	3	X	Unpreserved	1953
9	MW-7		WATER	WT	09/25/02 18:33	3	X	Unpreserved	1954
10	SUMP / TRENCH		WATER	WT	09/25/02 18:50	3	X	Unpreserved	1955
11	FIELD BLANK		WATER	WT	09/25/02 18:59	3	X	Unpreserved	1956
12	MW-5-10		WATER	WT	09/25/02 20:25	3	X	Unpreserved	1957

SHIPMENT METHOD: FedEx

AIRBILL NO.: 824135636509127102

SHIPPING DATE: 1

NO. OF COOLERS: 1

TEMP IN °C: 10

RECEIVED ON ICE: (X)

SEALED COOLER: (X)

SAMPLES INTACT: (X)

ADDITIONAL COMMENTS:

SAMPLER NAME AND SIGNATURE: S.W. [Signature]

DATE: 09/23/02

DATE: 09/23/02

Required Client Information: Section A

Company: **COOPER INDUSTRIES**
Address: **COOPER INDUSTRIES (CEC)**
Copy To: **LARRY DRANE (CEC)**
Invoice To: **COOPER IND**
P.O.:

Required Client Information: Section B

Report To: **NELSON OLAVARRIA**
Project Name: **NECHAMAN, KY**
Project Number:

Page: **2** of **2**

Client Information (Check quote/contract):
Requested Date: **09/24/02**
TAT:

Project Manager:

To Be Completed by Pace Analytical and Client
Quote Reference: **690047**
Section C

Project #: **02-40467**
Profile #:
Requested Analysis:

ITEM #	Section D	Required Client Information:	Valid Matrix Codes		DATE COLLECTED	TIME COLLECTED	# Containers	Preservatives							Remarks / Lab ID
			MATRIX	CODE				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	
1	MW-6	One character per box. (A-Z, 0-9 / -)	WATER	WT	09/24/02	09:40	3	X							1958
2	EQUIPMENT	Sample IDs MUST BE UNIQUE	SOIL	SL	09/24/02	10:00	3	X							1959
3	BLIND DWP		WIP	WP	09/25/02	10:00	3	X							1960
4			AIR	AR											
5			TISSUE	TS											
6			OTHER	OT											
7															
8															
9															
10															
11															
12															

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
SHIPMENT METHOD	8247135020509123102	09/23/02	1		Supl. W. L.	09/24/02		C. Chelmsworth	9/27/02	11:00
SAMPLE CONDITION	SAMPLE NOTES									
Temp in °C	No VIAL									
Received on Ice	N/A									
Sealed Cooler	N/A									
Samples Intact	N/A									

SAMPLER NAME AND SIGNATURE										
PRINT Name of SAMPLER: S. Weir										
SIGNATURE of SAMPLER: S. Weir										
DATE Signed: (MM / DD / YY) 09/24/02										

APPENDIX F

HISTORIC GROUNDWATER ANALYTICAL RESULTS

Trench

Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Mar-98	Mar-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2					U	U	U	U	U
Acetone	--					U	U	U	3.J	U
Carbon Disulfide	--					U	U	U	U	U
1,1-Dichloroethene	7					U	U	U	U	U
1,1-Dichloroethane	--					U	U	U	U	U
1,2-Dichloroethene (total)	70	NA	78	6.6	62	76	13	78	55	69
Chloroform	--					U	U	U	U	U
Trichloroethene	5	2280	2700	270	1800	2300	410	910	1700	1300D
Benzene	5					U	U	U	U	U
Tetrachloroethene	5					U	U	U	3.J	U
1,1,2,2-Tetrachloroethane	--					U	U	U	U	U
Toluene	1000					U	U	U	U	U
Chlorobenzene	--					U	U	U	U	U
Ethylbenzene	700					U	U	U	U	U
Styrene	100					U	U	U	U	U
Xylene (total)	10000					U	U	U	U	U

Notes:
J - Estimated value: less than the CRQL
U - Constituent analyzed for and not detected
NA - Well was not completed at the time of the July sampling event
NS - Well not sampled
D - Reported value was determined after dilution
B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

R-2

Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Mar-98	Mar-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2	54	49	NS	NS	43	34	38	33	35
Acetone	--					U	U	U	4.1J	4.1J
Carbon Disulfide	--					U	U	U	U	U
1,1-Dichloroethene	7					U	U	2.8	3.9	3
1,1-Dichloroethane	--					U	U	U	U	U
1,2-Dichloroethene (total)	70	1455	2100	NS	NS	1400	1307	1407	1307	1206.4D
Chloroform	--					U	U	U	U	U
Trichloroethene	5	1460	1500	NS	NS	600	210	170	200	130
Benzene	5					U	U	5.4	5.3	5
Tetrachloroethene	5					U	U	U	U	U
1,1,2,2-Tetrachloroethane	--					U	U	U	U	U
Toluene	1000					U	U	U	U	U
Chlorobenzene	--					U	U	U	U	U
Ethylbenzene	700					U	U	U	U	U
Styrene	100					U	U	U	U	U
Xylene (total)	10000					U	U	U	U	U

Notes:
J - Estimated value: less than the CRQL
U - Constituent analyzed for and not detected
NA - Well was not completed at the time of the July sampling event
NS - Well not sampled
D - Reported value was determined after dilution
B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

Well Number 5-2																							
Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Apr-97	Nov-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2	180	110	310	110	100	51	110	77	440	380	260	110	190	110	33	41	31	37	32	15	16	22
Acetone	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	3.4J	U
Carbon Disulfide	--	U	7	U	U	U	U	U	U	U	U	12	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	7	3 J	3 J	U	3 J	0.7 J	U	3 J	U	4 J	U	2.6 J	2.7 J	3.6 J	3.0J	U	U	U	2	2	U	1.9J	2.6J
1,1-Dichloroethane	--	1J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	70	1500 D	1700 D	3200 D	2300 D	1800 D	1700 D	1600 D	1500 D	1200	1700	1200	870 D	1100 D	1300	1200	1200	540	610	870	899	905	1105.6D
Chloroform	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	25	8.2
Trichloroethene	5	1700 D	620 D	2500 D	2000 D	1100 D	1500 D	990 E	1200 D	510	570	400	130	470 D	170	160	180	110	110	51	76	57	40
Benzene	5	0.7 J	U	0.3 J	2 J	U	U	1 J	U	2 J	2.5 J	1.2 J	1.1 J	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	5	2 J	U	6	3 J	2 J	2 J	U	U	0.6 J	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	--	U	U	U	U	U	U	2 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	1000	1 J	1 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	700	U	U	U	U	U	U	U	U	0.2 J	U	U	U	U	U	U	U	U	U	U	U	U	U
Styrene	100	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Xylene (total)	10000	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
J - Estimated value: less than the CRQL
U - Constituent analyzed for and not detected
NA - Well was not completed at the time of the July sampling event
NS - Well not sampled
D - Reported value was determined after dilution
B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

Well Number 5-2A																							
Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Apr-97	Nov-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2	180	110	310	110	100	51	110	77	440	380	260	110	190	110	33	41	31	22	23	31	25	25
Acetone	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	3.6J	3.6J
Carbon Disulfide	--	U	7	U	U	U	U	U	U	U	U	12	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	7	3 J	3 J	U	3 J	0.7 J	U	3 J	U	4 J	U	2.6 J	2.7 J	3.6 J	3.0J	U	U	U	2	2	2.1	1.9J	1.6J
1,1-Dichloroethane	--	1J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	70	1500 D	1700 D	3200 D	2300 D	1800 D	1700 D	1600 D	1500 D	1200	1700	1200	870 D	1100 D	1300	1200	1200	540	870	770	950	640	703.4D
Chloroform	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Trichloroethene	5	1700 D	620 D	2500 D	2000 D	1100 D	1500 D	990 E	1200 D	510	570	400	130	470 D	170	160	180	110	67	110	150	39	85
Benzene	5	0.7 J	U	0.3 J	2 J	U	U	1 J	U	2 J	2.5 J	1.2 J	1.1 J	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	5	2 J	U	6	3 J	2 J	2 J	U	U	0.6 J	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	--	U	U	U	U	U	U	2 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	1000	1 J	1 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	700	U	U	U	U	U	U	U	U	0.2 J	U	U	U	U	U	U	U	U	U	U	U	U	U
Styrene	100	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Xylene (total)	10000	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
J - Estimated value: less than the CRQL
U - Constituent analyzed for and not detected
NA - Well was not completed at the time of the July sampling event
NS - Well not sampled
D - Reported value was determined after dilution
B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

Well Number 5-10																								
Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Apr-97	Sep-97	Nov-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	1	1	U	U	U
Acetone	--	U	U	U	U	U	U	U	U	U	1.1	NS	U	U	U	U	U	U	NS	U	U	U	4.2J	U
Carbon Disulfide	--	U	0.9 J	U	U	U	U	1 J	U	U	4.5	NS	2.2 J	U	2.3 J	2.3 J	2.3 J	U	NS	U	U	U	U	U
1,1-Dichloroethene	7	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	U	U
1,1-Dichloroethane	--	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	U	U
1,2-Dichloroethene (total)	70	U	U	U	U	U	U	U	U	0.7 J	U	NS	U	3.8 J	U	U	U	U	NS	12	12	9.3	7.7	11
Chloroform	--	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	U	U
Trichloroethene	5	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	U	U
Benzene	5	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	U	U
Tetrachloroethene	5	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	U	U
1,1,2,2-Tetrachloroethane	--	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	1.1J	U
Toluene	1000	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	U	U
Chlorobenzene	--	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	U	U
Ethylbenzene	700	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	U	U
Styrene	100	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	NS	U	U	U	U	U
Xylene (total)	10000	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	8.8 B	U	NS	U	U	U	U	U

Notes:
J - Estimated value: less than the CRQL
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NA - Well was not completed at the time of the July sampling event
NS - Well not sampled
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B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

Well Number 5-11																									
Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Feb-98	Feb-98	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Apr-97	Nov-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2			U	45	42	52	38	45	37	34	65	120	40	8.4	24	8	26	20	22	22	24	28	20	22
Acetone	--			U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	4	4	U	3.5J	3J
Carbon Disulfide	--			U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	7			U	U	U	2 J	U	U	U	U	2 J	1.8 J	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	--			U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	70			2 J	660 D	1100 D	1200 D	910 D	730 D	630 D	720 D	670	660	610	200 D	230 D	140	310	380	250	200	360	360	210	260D
Chloroform	--			U	U	U	U	U	U	U	U	U	U	U	U	14	U	U	U	U	U	U	U	U	U
Trichloroethene	5			3 J	710 D	870 D	940 D	460 D	270 D	230 D	170	120	95	100	43	35	11	U	21	U	3	8.9	9.1	1.3J	U
Benzene	5			U	U	U	U	U	U	U	U	0.9 J	1 J	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	5			U	2 J	1 J	1 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	--			U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	1000			3 J	U	U	U	U	2 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	--			U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	700			U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Styrene	100			U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Xylene (total)	10000			U	U	U	U	U	U	U	U	U	U	U	U	U	U	6.5	U	U	U	U	U	U	U

System01400

Notes:
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B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

Well Number CMW-6																								
Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Apr-97	Sep-97	Nov-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
Acetone	--	19	U	U	U	U	U	U	U	U	16	NS	U	U	U	U	U	140	U	U	U	U	4.1J	U
Carbon Disulfide	--	U	U	U	6	U	U	8	U	18	26	NS	47	2.3 J	1.4 J	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	7	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	--	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	70	U	4 J	U	U	1 J	U	U	U	1 J	U	NS	2.1 J	U	1.2 J	U	U	U	U	U	U	U	U	U
Chloroform	--	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
Trichloroethene	5	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
Benzene	5	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	5	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	--	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	1000	U	U	U	U	U	U	U	72	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	--	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	700	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
Styrene	100	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	U	U	U	U	U	U	U	U
Xylene (total)	10000	U	U	U	U	U	U	U	U	U	U	NS	U	U	U	U	6.5	U	U	U	U	U	U	U

Notes:
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U - Constituent analyzed for and not detected
NA - Well was not completed at the time of the July sampling event
NS - Well not sampled
D - Reported value was determined after dilution
B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

Well Number CMW-7																							
Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Apr-97	Nov-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2	97	100	45	110	97	85	95	41	84	98	5.1 J	21	54	U	39	22	31	35	25	31	24	23
Acetone	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	3.8J	3.8J
Carbon Disulfide	--	U	U	U	U	U	U	U	U	6 J	1.5 J	2.2 J	U	10	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	7	1 J	U	U	U	U	U	U	U	2 J	U	U	U	U	U	U	U	U	1	U	U	1.3J	1.2J
1,1-Dichloroethane	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	70	680 D	590 D	360	870 D	870 D	770	1100 D	590 D	740	510	67	180	800 D	5	710	660	570	690	610	650	562	610D
Chloroform	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Trichloroethene	5	89	100	37	100	110	68	130	90	78	13	U	1.8 J	58	U	17	13	U	11	6.5	6.6	3.1J	U
Benzene	5	U	U	U	1 J	U	1 J	2 J	U	3 J	1.7 J	U	U	2.1 J	U	U	U	U	2	U	U	1.6J	U
Tetrachloroethene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	1000	U	U	U	U	U	U	U	U	0.1 J	U	U	U	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	700	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Styrene	100	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Xylene (total)	10000	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
J - Estimated value: less than the CRQL
U - Constituent analyzed for and not detected
NA - Well was not completed at the time of the July sampling event
NS - Well not sampled
D - Reported value was determined after dilution
B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

Well Number CMW-9																								
Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Apr-97	Sep-97	Nov-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2	U	U	U	U	U	U	U	U	U	5.4	1.2 J	U	U	U	17	U	U	U	2	U	U	2.2	1.7J
Acetone	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	4.7J	U	
Carbon Disulfide	--	U	1 J	U	U	U	U	U	U	1 J	U	0.8 J	9.3 J	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	7	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	70	U	U	U	4 J	3 J	4 J	4 J	U	5 J	8 J	6.7 J	8.6 J	6.9	1.9 J	260	U	U	U	13	14	14	14	15
Chloroform	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Trichloroethene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	3.0J	U	U	U	U	U	U	U	U
Benzene	5	U	0.9 J	U	U	U	U	U	U	U	0.7 J	U	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	1000	U	U	U	U	U	U	U	U	0.2 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	700	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Styrene	100	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Xylene (total)	10000	U	U	U	U	U	U	U	U	0.5 J	0.6 J	U	U	U	U	U	U	U	U	U	U	U	U	U

Notes:
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B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

Well Number CMW-12																						
Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Sep-97	Nov-97	Apr-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2	7	U	U	U	U	U	U	U	7	25	14	22	10	8.5	U	U	6	5.2	5.2	5.7	5.7
Acetone	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Carbon Disulfide	--	U	1 J	U	1 J	U	U	U	U	U	0.78 J	2.9 J	U	U	U	U	U	U	U	U	U	
1,1-Dichloroethene	7	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
1,1-Dichloroethane	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
1,2-Dichloroethene (total)	70	27	4 J	6	1 J	9	U	2 J	U	23	150	95	50	10	110	91	U	73	76	84	75	93
Chloroform	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Trichloroethene	5	U	U	U	U	U	U	U	U	U	0.7 J	U	U	U	U	U	U	U	U	U	U	
Benzene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Tetrachloroethene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
1,1,2,2-Tetrachloroethane	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Toluene	1000	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Chlorobenzene	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Ethylbenzene	700	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Styrene	100	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
Xylene (total)	10000	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	

Notes:
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NS - Well not sampled
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B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

Well Number CMW-12-16																								
Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Apr-97	Sep-97	Nov-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2	U	U	U	U	U	U	U	U	18	NS	NS	1.7 J	1 J	NS	NS	U	U	U	2	U	U	1.3J	1.2J
Acetone	--	31	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
Carbon Disulfide	--	U	U	U	U	U	U	U	U	U	NS	NS	1.5 J	U	NS	NS	U	U	U	U	U	U	U	U
1,1-Dichloroethene	7	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
1,1-Dichloroethane	--	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	70	U	U	U	U	U	U	U	U	4 J	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
Chloroform	--	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
Trichloroethene	5	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
Benzene	5	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
Tetrachloroethene	5	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	--	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
Toluene	1000	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
Chlorobenzene	--	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
Ethylbenzene	700	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
Styrene	100	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U
Xylene (total)	10000	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	NS	U	U	U	U	U	U	U	U

Notes:
J - Estimated value: less than the CRQL
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D - Reported value was determined after dilution
B - Constituent detected in associated blank and is a suspected laboratory contaminant
MCL - Maximum contaminant level

Well Number CMW-13																							
Analytes VOLATILE ORGANICS (ug/l)	Federal MCL	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Apr-97	Sep-97	Nov-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Sep-01	Apr-02	Sep-02
Vinyl Chloride	2	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
Acetone	--	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	3.0J	U	U	U	2	U	1.2J	U
Carbon Disulfide	--	U	0.7 J	U	5 J	U	U	U	U	0.9 J	NS	NS	3.5 J	5 J	NS	U	U	U	U	U	U	U	U
1,1-Dichloroethene	7	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
1,1-Dichloroethane	--	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	70	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
Chloroform	--	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
Trichloroethene	5	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
Benzene	5	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	2.0J	U	U	U	U	U	U	U
Tetrachloroethene	5	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	--	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
Toluene	1000	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	2.0J	U	U	U	2	U	U	U
Chlorobenzene	--	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
Ethylbenzene	700	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
Styrene	100	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U
Xylene (total)	10000	U	U	U	U	U	U	U	U	U	NS	NS	U	U	NS	U	U	U	U	U	U	U	U

Notes:
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NS - Well not sampled
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MCL - Maximum contaminant level

Well Number MW-85																								
Analytes	Federal	Jul-93	Aug-93	Jan-94	Jul-94	Nov-94	Apr-95	Oct-95	May-96	Nov-96	Apr-97	Sep-97	Nov-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00	May-00	Oct-00	Apr-01	Sep-01	Apr-02	Sep-02
VOLATILE ORGANICS (ug/l)	MCL																							
Vinyl Chloride	2	U	14	7	U	U	U	U	U	U	5.1	1.8 J	1.8 J	U	U	U	U	U	U	1	U	U	U	NS
Acetone	--	770 D	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	1	U	U	U	NS
Carbon Disulfide	--	U	U	9	U	U	U	U	U	3 J	U	6.5 J	8.2 J	U	U	U	U	U	U	U	U	U	U	NS
1,1-Dichloroethene	7	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
1,1-Dichloroethane	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
1,2-Dichloroethene (total)	70	4 J	7	5	3 J	1 J	U	U	U	1 J	1.5 J	1.9 J	U	U	U	U	U	U	U	U	U	U	U	NS
Chloroform	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
Trichloroethene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
Benzene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
Tetrachloroethene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
1,1,2,2-Tetrachloroethane	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
Toluene	1000	U	U	U	U	U	U	U	U	0.2 J	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
Chlorobenzene	--	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
Ethylbenzene	700	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
Styrene	100	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS
Xylene (total)	10000	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NS

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MCL - Maximum contaminant level